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The New Volume.

Although we have never been desirous of obtruding our business arrangements upon public notice, or of making a display of names, it still seems appropriate at the opening of a new year and volume, to assure readers that we are at least doing our best to advance their interests and deserve their patronage. We have never entered upon a year for which we have thought ourselves able to make higher promises, and keep them, than we now can for 1859—not only as regards the prospect for the continuance and extension of the voluntary correspondence with which we have been favored to an unparalleled degree for several years past, but also with respect to the direct engagements into which we have entered for editorial assistance.

Our associate JOHN J. THOMAS, will of course continue to afford us his invaluable aid. Readers may not all be aware how much, in other departments of this journal beside the Horticultural, they have always been indebted to his extensive practical acquirements, accurate judgment and sound reasoning.

Mr. J. H BIXBY, now a farmer in Niagara county, but known for many years to the readers of agricultural journals as an editor or contributor, has during the past year written many of the plainest and most pointed articles we have published,—marked by clearness and force of reasoning, brevity, and practical knowledge, and thus best calculated to strike the eye and impress the mind and memory. It gives us pleasure to say that we shall receive during the coming year, *largely increased* assistance from this source.

Those who have been familiar with the contributions to our columns of Mr. LEVI BARTLETT of New Hampshire, will not need to have their attention called to the sterling value with which they have been generally replete. Mr. BARTLETT's assistance will be continued as heretofore.

Our expectation is to supply upon all the wide variety of subjects which claim the attention of the practical farmer, the village cultivator, the gardener, the orchardist, or the extensive land owner, better chosen and more complete stores of seasonable information and suggestive hints, than has even been the case during 1857 and 1858. The CULTIVATOR will share in these with the COUNTRY GENTLEMAN, to the extent of its capacity. The latter Journal includes a large number of separate Departments, in which something is every week presented, in order that no one may ever fail of finding more or less suited to his tastes and wants. In the CULTIVATOR, which appears at intervals four times greater, it is of course impracticable to attempt so much, and we can only compress a comparatively limited part into its smaller pages.

But we have this advantage from the fact that both the weekly and monthly journals are issued from one source, that the latter derives a great proportion of the benefit of those arrangements which the former compels; expenditures which no *Fifty Cent* or *Dollar* journal could for a moment think of sustaining, become easy by this connection with one of higher price, and the only difficulty we experience, when with each recurring month we are getting ready the next issue of the CULTIVATOR, is to get into its columns all that we wish to select for them from the wide field in which we have to choose.

Hence it is that we so earnestly solicit our friends to extend the circulation of THE CULTIVATOR. For the insignificant sum of a *Half Dollar* its readers receive so much, that it seems as if no man, after an explanation of the subject and a moment's thought, could hesitate to subscribe,—as if, in fact, it would be taken, as it should be, by hundreds of the farmers who surround every post-office, instead of by twos and threes, or tens and twenties. We offer to forward numbers of the paper for the examination which we invite, and we can but again express the hope that every one under whose eye this article may come, will feel inclined to respond with a little hearty effort to attract public attention to the subject.

It will not be forgotten that subscribers in clubs also receive for the *Fifty Cents* the ANNUAL REGISTER OF RURAL AFFAIRS—a few of the Illustrations from an article in which we venture to copy elsewhere, in order that readers may know what to expect from the rest.

☞ For TERMS TO CLUBS, &c., please see last page.

The Best Doctor for Animals.

We have seen a great deal of doctoring for sick animals,—some successful, and a great deal of it unsuccessful,—and we have long since come to the conclusion that the most skillful physician we have ever met with is Doctor Nurse. If an animal, (as well as human being,) is not carefully taken care of,—nursed,—all the medicine in the world can do but little good. And, on the other hand, *with* good nursing, medicine is generally unnecessary. Our own observations lead to the opinion that in at least nine cases out of ten, as commonly administered, medicine does more harm than good.

An eminent New-York physician said that taking medicine was always a choice of evils—that being poisons in nearly all instances they necessarily did harm to the system, and were never to be employed unless there was a strong probability that they would benefit more than injure. This is not the rule adopted in doctoring horses, by most horse-jockies and others having care of these animals, if we might judge from the way in which gunpowder, salts, red-pepper, turpentine, whiskey, corrosive sublimate, and other violent remedies, are administered at hap-hazard, increasing in nearly all cases the violence of the disease. It may be laid down as a general rule, that it is much safer to give too little than too much medicine; and that none should be given unless we know distinctly how it is to operate and what it is for.

Some years ago, a valuable horse caught cold, and was troubled with a cough so severe that he might be heard half a mile, and which appeared to be rapidly reducing his flesh. We had an abundance of prescriptions from neighbors of all kinds of frightful medicines, enough to have killed him, had he been in perfect health. We concluded to discard all, and to place him under the attention of Dr. Nurse. Great care was taken never to work him to perspiration—he was blanketed whenever the weather was chilly—he was fed regularly and moderately on *succulent* food, all such food partaking of the character of expectorants, and favoring a free discharge from the lungs—and all his other wants were observed as well as we were able to, and promptly supplied. In six weeks he was perfectly well. Had some nostrum been employed, it might have injured him and prevented recovery; or if it had not, Dr. Nurse might not have been called in; but if he had, and the medicine had not greatly retarded his recovery, and he had got well in six months, it would unquestionably have been regarded as an extraordinary cure. At another time, a valuable mare, eleven years old, was badly sweenied by hard work—the worst case of sweeny we ever met with. It was generally regarded as a hopeless case—but various remedies were proposed and offered, costing from $20 down to $3. We concluded that our old friend Dr. Nurse should be again called to the exclusion of all these fellows, and the consequence is that with simply careful moderate treatment, the animal is well and the sweeny filled up.

The majority of sick horses get well; every owner tries some remedy; and that particular medicine that he happened to be using at the time, gets all the credit—although as a general thing it retarded more or less his recovery.

We must make one exception in the general rejection of medicines—there is one, which if given moderately can scarcely ever injure, and may often do much good. This is *powdered charcoal*—a powerful antiseptic, and absorbent of bad matter, while, unlike most other medicines, it does not irritate—a most important advantage. A clear illustration of this advantage recently occurred in the case of a fine calf five months old, which had become bloated by eating too many apples, blown down by a violent gale. Its sides became distended by wind to an almost incredible size; a solution of saleratus was poured down its throat repeatedly, and as often thrown out violently on account of its irritating action on the throat of the young animal. It continued for eighteen hours with little or no improvement, when a large tablespoonful of powdered charcoal mixed with half a pint of water was given. The dose was swallowed without any difficulty, and in four hours the calf appeared to be perfectly well. Charcoal may be given in nearly all cases of derangement of the digestion, whether with men or beasts, with great advantage. One-half to a teaspoonful is a full dose for a man, and as much more for an animal as its food exceeds that of a man.

We do not mean to say there are not other medicines that do not occasionally prove eminently useful; but unless they can be given understandingly,—with a full comprehension of their mode of action, and with an undoubted knowledge of the exact nature of the disease,—and their use sanctioned by very clear and distinct previous success,—it would be much safer to discard them.

Trees for Screens—Soil for Flowers.

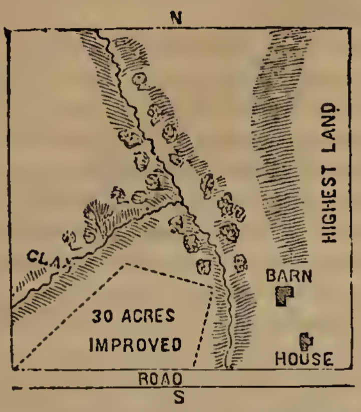
Messrs. Eds.—I am laying out a flower garden. It is a red gravelly soil. What does it require to make it fit for the purpose?

I wish to set out a few trees. I should like something that would afford protection from winds, and at the same time ornamental—something bearing a blossom would be preferable—also a quick grower, and able to stand a stiff breeze. Please take into consideration our winters—24° below zero sometimes. A Subscriber. *St. John, N. B.*

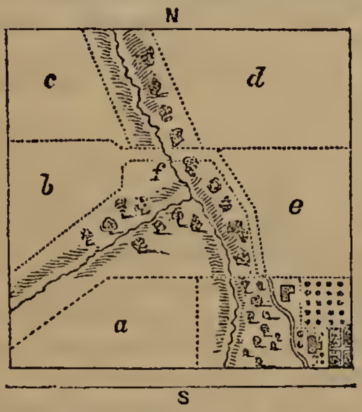
It is difficult to find a tree containing every requisite. We always prefer *evergreens* for screens. If there are any dense and rapidly growing native pines which our correspondent can procure from the borders of woods, (the *white pine* is one of the best if to be had,) he may easily transplant them by removing with them large circles of earth. If these cannot be had, procure from nurseries the Norway spruce, or the Scotch or Austrian pines, all of which are fast growers. Among deciduous trees, the silver poplar is perhaps the most rapid grower, and will form a good screen, if its numerous suckers are no objection. The European larch is nearly as rapid in growth. The horse chestnut and mountain ash are handsome flowering trees, but they are moderate in growth and do not become very large. The Dogwood, Cercis and Catalpa, are very handsome when in flower, but have thin foliage. The red maple is a good grower, and bears showy scarlet flowers. All these are quite hardy.

If the soil spoken of is not already fit for a flower garden, add plenty of old rotted manure, well seasoned compost, and swamp muck or black mould from the woods. The last named is one of the very best materials that can be found.

Laying-out a Farm in Kansas.



I send the above, which is about the way my 160 acres lie; it all slopes to the ravine; is black heavy loam, clay bottom; one place marked clay, is at surface or nearly so; that marked highest part, is a sort of swell on the rolling prairie, having quite a descent to the ravine. I think I might have a side-hill barn. You will oblige by laying out the fields, road, orchard, garden, &c. The ravine is a running stream most of the year—there cannot be a plow run through it. There is a little timber each side and brush-wood, which, if I keep fire out, will soon produce timber enough for fuel. I think of planting young cotton trees along the road; I have plenty of them. Shall I plant them alternate with black walnut? The timber is growing about as marked on the ravine. In the forks there is quite large timber. I would propose a field there, fenced in as timber field—but you will know best. John Doy. *Lawrence, Kansas.*



We have endeavored to reduce this tract of land to a regular laid-out farm as above. The garden lies above and to the right of the house—if the land and view are suitable, we propose a lawn planted with shade trees, &c., on the slope below the house—which may be also used as a horse and sheep pasture. The orchard is above the barn. The field marked *a* is entered from the public road—all the others through the lane, as represented. At *f* there is a bridge—*b* and *c* may be as one field if desired. Less land may be left along the ravine, if suitable. The fences between *c* and *d*, and between *a* and *b*, may be built only on one side of the ravine, if cattle could be excluded from the timber land. The nearer part of field *c* might be divided off for a calf or hog pasture, if desired, by a fence running east and west. The entrance road to the house may also pass around it to the right, as convenience may require.

It will be observed that the lane or farm road is kept nearly on a level, a most important requisite, although the fields, *d* and *e*, entered from it, lie on the high ridge.

Butter and Butter-Making.

Looking over, in Secretary's Flint's last Report to the Mass. Board of Agriculture, the awards of the Dairy Committee, we find appended a series of remarks by W. S. Lincoln, chairman, from which we condense the following:

Good cows, sweet feed, and pure water, are the first of all requisites to the manufacture of good butter. Good cows, that proper color and right consistency be secured—sweet feed and pure water, that no flavor be imparted to the milk which would render the butter unpalatable. Dependent, however, as is the quality of the article manufactured, upon the cow and the goodness of the food, a proper degree of care and skill on the part of the dairy-woman is of much greater consequence. Care that all the utensils of the dairy are kept dry and sweet; that the milk-room is well ventilated—of a proper temperature, free from dampness and the unpleasant smell generated by moisture; that the cream is not allowed to stand too long upon the milk, nor after it is skimmed; that it be churned at a proper temperature, the operation neither being hurried unduly, or carried too far; that it should be salted with the nicest salt obtainable, not injured by the addition of sugar or saltpetre; and that all the buttermilk be properly and effectually removed.

Butter is judged by its color, aroma, taste and consistency. Its *color* should be a delicate pale straw, not approaching white, and yet perhaps that is better than the deep orange tint, almost always sure indication of extraneous coloring matter. The peculiar *smell* always given off by the nicest butter is easily recognized. The better the quality the more delicate this aroma, while as the quality degenerates, about in the same proportion does the smell vary until it becomes positively offensive. This fragrance is dependent very much on the process of manufacture. Orange county dairy-maids make "Orange county butter" wherever they follow the same processes. The *taste* of the butter will betray any inattention to the proper care of either the milk, cream, or the vessels in which they are kept. So is the addition of any foreign matter, such as impure or too much or too little salt, sugar, or coloring matter. A certain amount of salt is necessary to bring out the true flavor of butter in its greatest delicacy. In texture or *consistency*, a greater difference was presented than upon any other point, in the lots examined by the committee. Some were waxy, leaving no mark upon a knife after being thrust into a lump, with hardly enough moisture to dim its brightness, while other lots were soft, leaving greasy streaks upon the blade, and large drops of an opaque liquid oozing from the newly cut surface. The existence of either of these signs, give sure indication of an imperfect if not bad process of making. The utmost moisture which should be found in thoroughly worked butter, is a very slight dew, and it should be of such firm, waxy consistency, as to slice down, hardly dimming the brightness of a knife-blade. No butter is properly made unless it will bear these tests.

☞ We learn that Capt. H. L. Shields of Troy, has recently made an importation of three full-blooded Leicester sheep.

Cost of Cutting Drains Reduced to less than One-half.

Among the many experiments we have witnessed in under-draining, on all tenacious soils or medium loams, if the work has been well performed, and good farming adopted, the cost has been returned in the increased crops obtained from the land, within three years. Two years is the most common period, but it not unfrequently happens in extreme cases, that the increase of the first year pays the entire cost. Besides this, a great saving is made by the uninterrupted work which may be done on drained land, its susceptibility of early spring tillage, and the greater ease of working a well pulverized soil Cultivators are learning these facts, and are stimulated to exertions to effect this great improvement. But they are immediately met, and generally arrested, by the heavy cost required. It is only in unusually favorable soils that three-feet ditches (and none should be much if any less in depth,) can be dug by hand for less than thirty cents a rod. They should be as near together as two rods—making 80 rods or $24 for every acre, not estimating the expense of tile, transportation, laying and covering, which would advance the cost to about $38 per acre, where tile at $10 per 1000, can be purchased within a few miles.

The writer has made many experiments with various ditching machines, with a hope of greatly reducing this heavy expense, and has at last attained the desired object in a considerable degree—so that ditches, costing at three feet in depth not less than 30 cents a rod in the hard clayey, tenacious soil operated on, have been cut for about 12 cents a rod; and it is believed that with the practical knowledge now attained, three-feet drains may be cut for 10 cents a rod, or at one-third the cost when done wholly by hand.

The process is a very simple one. A subsoil plow of peculiar construction, is so made that the draught-beam and handles may be successively elevated, as the ditch becomes deeper; with this plow and a pair of horses, the hard earth in the bottom of the drain, which is only loosened by the pick in the common process, is broken up, and all the hand labor required is throwing out this loose earth. This labor is performed with the common long-handled, pointed shovels, (as shown in the annexed figure,) and when the ditch has been cut to about one-half of its intended depth, a similar shovel, with the sides bent up at a blacksmith's, to fit the narrow channel, is then made use of—(fig. 2.) A very hard or stony hard-pan requires considerable dressing off with the pick, to prepare the bottom for laying the tile, but where the soil is more favorable, such dressing is scarcely necessary. One two-horse team will commonly plow fast enough to keep from six to twelve men constantly shoveling, varying with the hardness of the soil.

Fig 1.

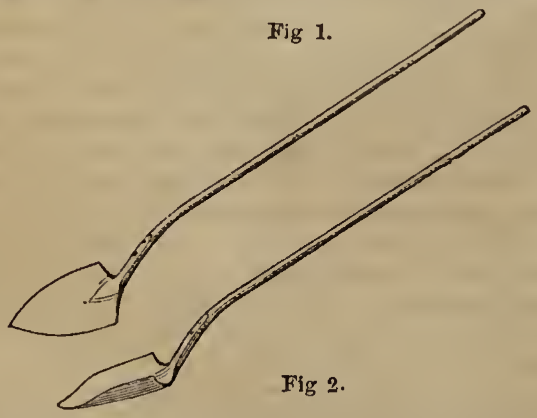


Fig 2.

In an experiment performed the present autumn in cutting drains a mile and a-fourth in aggregate length, a small portion was much intercepted with rocks and some quarry stone, with great numbers of smaller stones. Through these portions, the subsoil loosening plow could be used but imperfectly, and it was necessary to occupy eight days' work in quarrying, &c., and ten days more in dressing off these stoney and hard bottoms with pick and crowbar.

The following is the actual cost of 400 rods :—

4	days with two-horse team,	$ 8.00
35	" shoveling, 87½ cents,	30.75
10	" dressing bottom, &c.,	8.75
8	" quarrying rocks, &c.,	7.00
5	" laying tile and covering it,	4.37
5500	tile, 95 cents,	52 25
	Drawing half mile,	2.00
	Plowing in ditches,	1.50
		$114.62

or 28½ cents a rod, completed.

Omitting the four last items, connected with the tile and laying it, the cost of merely cutting the drains is $54.50, or 13½ cents a rod; or omitting the cost of quarrying the stone, and two-thirds of dressing the bottom, (this being confined to a very small portion,) the expense would be 10 1-5 cents a rod.

A part of the work was done during a severe drouth, when the subsoil was very hard, and the loosening was consequently slower and more laborious. Earlier in the season, when the earth is softer, the loosening plow would do its work in less than half the time here required. This would be especially important where a fractious hard-pan exists. From one to six inches of earth are loosened at each passage of the plow. An "evener" or central whipple-tree, from five to seven feet long, is required, the horses walking on opposite sides of the ditch.

We are satisfied that most soils may be thoroughly underdrained after a little experience, and where tile is easily accessible, at less than $20 per acre, the drains being three feet deep and two rods asunder; or that three feet ditches before filling may be cut for 10 cents a rod, and often somewhat less.

It is also very obvious that no complex machine can ever succeed as a ditcher, especially among stones, which constantly tend to jar and break it, but that the very simplest form of excavators must be adopted, which are easy to handle, light in striking stones, not liable to breakage, and easily and cheaply repaired.

Hardy Fruits.

Messrs. Editors —What are the *six* best varieties of *pear on quince*, and *cherries*, suitable for this northern latitude, where the thermometer sinks to 20° below zero? R. M. S. *Ottawa, C. W.*

The following varieties of the pear, which succeed well on the quince, have proved quite hardy at the west, where the thermometer often sinks to 20° below zero, and they would doubtless do quite as well at Ottawa, where the young wood would probably ripen better: *Buffum*, *Tyson*, *Stevens' Genesee*, *Flemish Beauty* if double-worked, (one of the hardiest of all pears,) *Osband's Summer*—*Lawrence* is very hardy, but does best as a standard.

The Dukes and Morello cherries are much the hardiest sorts, as *Early Richmond*, *Mayduke*, *Kentish*, *Belle Magnifique*, *Belle de Choisey*, *Morello*, *&c.*

Improvement of Grass Lands.

Messrs. Editors—The treatment of grass lands, or those that are designed for permanent mowing lands, seems to be engrossing the attention of farmers to a considerable extent at the present time, as the frequent communications in the various agricultural journals would seem to indicate; and I have been much interested and instructed in the perusal of the articles, in which the various modes of treatment for different kinds of soil, have been described by those who have successfully and profitably tried them. In those sections of country devoted exclusively, or in part, to grazing, this is a subject of vital importance, and deserves far more attention than it generally receives; and if farmers can be induced to give this branch of their business suitable attention, they will undoubtedly be much benefited by it. The practice has generally been to apply what little manure was made, to a few selected pieces of land, which are plowed from year to year, and leave the mowing lands to take care of themselves, with no means of renovating their exhausted energies except such as nature may have provided—and on the hills and mountains of New England these means are scanty enough. There are lands in this and most other towns in this part of the country, that have been mowed every year since they were cleared of the timber, which in some instances has been fifty years or more, which have never received any application of manure except what may have been dropped by the cattle which are allowed to roam over them spring and fall, to pick up what little grass escapes the scythe —and the scanty crops of inferior hay which these lands yield, speak with unmistakeable language of the effects of this scourging system of husbandry, if it can justly be called by that name.

There is one kind of land, which more than all others has been considered past redemption, or incapable of improvement, viz: those lands that are too wet to plow either in spring or fall for the purpose of cultivation. These tracts of land lay level or gradually sloping, and the wetness is caused by springs in the land, or by water laying on the surface with no means of running off; in this condition they are of but little value, either for mowing or pasturage, yet by judicious treatment and with little expense, they can be made to produce the largest crops of grass, and they are therefore our most valuable grass lands. On my farm there are several acres of this kind of land. It is a long level piece, bounded on one side by a steep high hill; on the other side the land falls abruptly down to a narrow intervale, through which a stream of water runs; this piece of land is a little highest on the side next to the brook, consequently all the water which falls on it has to pass off by evaporation, and the soil being retentive, the water stands on the surface the larger part of the year.

A number of years since, I began to reclaim and improve this land in the following manner: In the fore part of September, when the land was dry, I plowed a strip on one end of the lot; it was plowed in narrow lands, plowing only on the sides, and driving round the ends of the lands; the object of this being to leave the center furrow through the land for an open ditch, which was deepened by going through it the second time with the plow, and then hoeing it out; this made a ditch about a foot deep.

The land was plowed in narrow strips across the whole width of the field; this made ditches running from the foot of the hill to the brook, and leaves the land in narrow beds; this affords sufficient drainage to carry off the surface water. The furrows were turned as flat as possible, and afterwards a dressing of compost manure was spread on the land, and then harrowed smooth. The land was then seeded with herds grass at the rate of one-half bushel to the acre, and lightly covered with a bush harrow. The grass soon came up and grew well, and before winter there was a good coat of grass over the field. The first crop of grass was rather uneven, and the quality about like rowen The first crop yielded one and a-half tons per acre. The next year the sward became thick and firm, and the crop of grass even, yielding about two tons of hay per acre, of a superior quality. This land previous to this, produced not more than one-half ton of hay to the acre, and that of a very poor quality. From year to year, as I have had time and manure to spare, I have reclaimed a portion of this lot, until the largest part of it has been improved. The result of this experiment has been very satisfactory and highly remunerating; and I think that the increased quantity and improved quality of the hay cut on this field, will pay a higher per cent. on the capital invested, than in any other improvement that I could have made in the same time.

On that part of the lot which I first plowed, the foul grasses now begin to displace the better kinds, and it will need to be plowed again soon; and as I go over with the lot again, I intend to put in underground drains where the open ditches now are. In this way I shall get rid of the open ditches, and leave the surface of the land smooth, and without any obstruction in cutting the hay or carting it off.

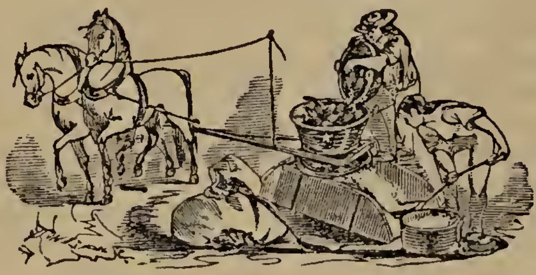
There are thousands of acres of land similar to this in Vermont, as well as in many other States, which might be improved in this way with but little expense, and which would afterwards yield a liberal income to the owners, besides adding much towards improving the aspect of the country, and setting examples worthy of being imitated; but which in their present condition are unproductive, either in good crops or good looks. C. T. Alvord. *Wilmington, Vt.*

Sorghum and Imphee.

A western farming friend, enjoying good opportunity to judge in the matter, sends us the following estimate of the value, present and prospective, of these products:

Few crops grown by farmers, faster makes friends among them, than the Chinese Sugar Cane. In spite of the ill-natured remarks of unbelievers, and the discouraging reports of unsuccessful experimenters during the last year, a goodly amount was planted the present spring; and it has done nobly—returning a fine yield, when many other farm crops proved failures. Those who have doubted heretofore, believe now, and unbelievers are shaken in their strongholds.

Numerous mills have been erected, and in many places, individuals are offering to manufacture the present and future crops upon terms pronounced very favorable and remunerative by farmers; and many of them are deciding upon making this a standard crop, along with corn and wheat, and some are sanguine enough to believe that in "Prairie land" within half-a-dozen years, sugar will be made beyond the wants of the population. The Imphee, or African cane, is receiving much praise, and it is reported will form sugar as readily as the sap of the maple. At all events, the success with these plants is such the present year, that hundreds of acres will be planted in '59, for every acre grown in '58. Experimenters will largely increase; we look for a generally favorable result. H.



Joice's Star Mill.

Farmers who use large quantities of ground meal for feeding their animals, have long felt the great inconvenience of carrying their grain to mill for this purpose, and dislike to sacrifice a portion for miller's fees, in addition to the labor of bagging, carting perhaps several miles, and returning for the load when ground, to be carted back. A cheap mill, driven by horses, which may be used at home, has therefore been long sought, and several have been constructed and introduced to some extent. We have recently given one of these a thorough trial, and are much pleased with its performance. It is *Joice's Star Mill*, manufactured by HILDRETH & CHARLES of Lockport, N. Y., and is regarded by many as the best of this class of machines, although some others have a high reputation.

The entire absence of cog-work or gearing, gives it a simplicity and freedom from friction, rendering the force applied to it of great efficiency. A stout horse will work it, but two horses are better and more efficient, and the labor they perform quite easy. It may be adjusted to grind fine or coarse, by simply turning a screw. The following periods of time were required to grind a bushel, in the experiments we have performed:

1 bushel of barley was ground in 5 minutes.
1 bushel of shelled corn was ground into fine meal in 10 minutes.
1 bushel of shelled corn was ground into coarse meal in 2½ minutes.
1 bushel of corn in cob was ground in 5 minutes.

The cob is ground very fine, and cannot be distinguished from the meal without close examination.

It will be perceived that the time required for grinding depends greatly on the fineness or coarseness of the meal; but for ordinary feeding, a two horse team will grind with great ease from 60 to 80 bushels of barley or corn in a day. By close driving, 120 bushels of barley may be ground in ten hours, and 240 bushels of corn into coarse meal. This will be far cheaper than the mere bagging and drawing to a common grist mill, and returning with the load, a distance of two or three miles, especially as the work may be all done on rainy days when men and horses have nothing else to do. Besides this, the toll is entirely saved.

The mill occupies a space of only a few feet in breadth, and the whole horse track may be under a shed 25 feet wide, and thus admit its use in all weather. It is said that when adjusted by the screw, or set very coarse, it will serve as a good corn sheller, shelling a bushel in two minutes. We have not tried it in this way, but have no doubt of its success.

Its price, we understand, is $54 for cash: for a farmer who grinds 500 bushels of feed in a year, it would save 50 bushels of toll, and in this way alone pay for itself in two years. Most farmers are however aware that grinding increases the value of the feed from 30 to 40 per cent., and consequently in grinding 300 bushels, its cost would be returned. The manufacturers assure us that 5,000 bushels may be passed through it without repairs, when the grinding surfaces require renewing at a cost of four dollars. This being the case, it may be used for ten years, with 500 bushels yearly, without renewal. This mill has in consequence of its value and efficiency, taken first premiums at several State and other fairs. It is one of those constant conveniences which no farmer, after having tried it for a time, would be willing to be deprived of.

Culture of the Sweet Potato.

To raise a crop of sweet potatoes observe the following rules:

1st. Select for that purpose, if convenient, sometime during the previous fall or winter, a piece of dry, rich sandy soil; and one if possible that has no garlic in it, for that is a choice food to a kind of grub worm which is often very destructive to the young sprouts.

2d. During the winter, or very early in the spring, it will be needful to provide heaps of compost on said land, at suitable distances apart, and at the rate of about 20 two-horse loads of compost per acre. A good compost is made of about equal weights of stable manure and marl; the manure should be placed in the bottom when the heap is first made, and when the weather begins to get warm in the spring, so that manure will ferment, the whole should be turned and thoroughly mixed together. In the absence of marl, perhaps swamp muck would be a good substitute, particularly if it has been improved by lying for a time under the cattle. Either stable manure, or marl or muck, or all together, may be very much improved by letting them lay for a time in the bottom of a pen where hogs are being fattened.

If the ground contains anything green, especially clover or garlic, it should be plowed in the fall or during the winter, as a precaution against the grubs, that the frosts of winter or early spring may kill a large number of them; for almost every one who is experienced in growing sweet potatoes has learned to his sorrow, that it is almost impossible to raise a crop of them where worms abound in the soil. Another reason for plowing early on this account, is, that such worms as are in the soil, may be starved out by keeping it entirely destitute of vegetation up to the time of setting out the plants; for these worms cannot live on nothing, nor on soil alone; and as the time for putting out the sprouts is not before the middle or latter part of May, after some weeks of warm weather, by that time whatever larva are hatched in the soil, would probably perish without food. But if there is much garlic about, the case is rendered almost hopeless, for the worms will resort to the white bulbs, and feed on them as long as they remain in the soil.

They are sometimes raised in hills, and farmed both ways, and sometimes in drills, when they are only cultivated one way; each way has its advocates, and perhaps each is the better way according to circumstances. With hills less manure is required for the amount of potatoes produced; with drills more potatoes may probably be grown to the acre; which way is attended with most labor, is probably a doubtful question. When grown in drills, the hilling up, preparatory to setting out the plants, may be done with a plow, which is an item of some importance; they may be also readily dug with a two horse plow, by first taking out the coulter, with less injury by cutting than if done with a hoe. If it is intended they shall be dug with a plow, the last time the vines are loosened up in the summer, they should be left all on one side of the row; the vines of each two adjoining rows turned towards each other, so as to have them out of the way of the plow on one side of the row at digging time, when the potatoes should be turned out on the top of the vines. Otherwise they should be cut off to prevent them from choking the plow—which may be done with a scythe, stalk knife, or large pocket or pruning knife, which ever is found most convenient. If potatoes are raised in hills, they may be turned out with a plow in the same way, though the advantage is not so obvious as when they are raised in drills. When all things are properly considered, perhaps it will be found the better way to raise them in hills, which appears to be the most adopted in this section. A hoe for making the hills might be made out of a shovel blade, 7 or 8 inches wide, by 6 or 7 long, and attached to the handle by a short goose-neck and ferrule, similar to a potato drag; when attached in this way it gathers less dirt, and is consequently lighter than if made with an eye for the handle. For digging, the hoe should be a little narrower and longer, heavier or stronger, with an eye large enough to admit a handle that will not be liable to break in the operation.

About corn-planting time, or very soon after, the ground should be marked out in shallow furrows about three feet apart each way; or, if intended to raise them in drills, three and a half or four feet will not be too great a distance.

If planted in drills the manure may be spread through the whole length of the drill, and the plants set about sixteen inches apart; if in hills, about two quarts or a little more of compost per hill, will be sufficient, and it should be covered with dirt before it has time to dry in the sun.

When the plants are set, a little hollow should be left around each one, which may be easily made by pressing the dirt around it with the hands; then, if it is not raining, nor the ground quite wet, some water should be had convenient, on a wagon if not otherwise, and about one-third of a pint applied to each plant as soon after it is set as may be. After the plants are set, the most important points are to keep the ground loose, and free from weeds and grass; (a grub worm cant crawl much on a loose surface, because the sand slips from under his feet,) about harvest time it should be hilled up pretty well round the plants with a plow, and after the vines have begun to run they should be loosened up occasionally with a small light pitchfork, to prevent them from taking root in the ground, in which case they would draw nourishment that would otherwise go to the hill. G. H. *New-Jersey.*

"My Experience" with Winter Butter.

"Winter butter" carries to most minds the idea of a white, bitter, unsavory article, as different from that made in June as two things bearing the same name can be. There are reasons for this—reasons in the management of cows and cream—but I am only intending to give you a bit of my experience in churning. The first winter that I kept a cow I had a day's job at churning—I remember it well, for there was considerable of the amusing as well as vexations about it—and I found out what the great trouble was—*the cream was too cold.* Since then, when I have anything to do with churning—and that "when" usually comes twice or more a week—I try to have the cream *just warm enough.* Then the butter comes in from fifteen to forty minutes, and in good condition too, if rightly managed.

To get the cream "just warm enough," various methods are practiced. The best way, to my notion, is to set the cream-pot in a warm room, and stir it occasionally. If in a hurry, set it in a vessel of warm water, and stir until it comes to the proper temperature. Do not *melt the cream;* if you do it will never make butter. It only needs to be warmed slightly—just so it feels *a little warm to the finger.* Sometimes, when I find after churning a while, that the cream is still too cold, I set the churn near the fire, leaving it (with occasional stirs) for a time, or more frequently, if in a hurry, I pour a little hot water into the churn, keeping the dash going all the while, so that none of the cream gets scalded. This operates like a charm—"my Dutchman," who wields the dasher of late, tells me "it is goot,"—as it often brings the butter in three minutes.

When the cream "froths up,' or thickens up until it will float the dasher, you may be sure it is too cold. You may churn if you like, but "the mischief is in it," and the butter will refuse to appear until the cream warms. Possibly you may warm it by churning, but it is a great saving of time, patience, and "elbow-grease," to warm it some other way.

In the day's churning before referred to, the cream "frothed up" badly. We put in warm water—we set the churn in a tub of hot water—we tried it with a thermometer and thought it too warm, and cooled it down with snow, and churned and churned, and all to no avail. Finally setting the churn in hot water, we concluded to "boil it out," and then, with a few minutes churning, it came. The buttermilk fairly steamed with heat as we opened the churn to take out the butter, and was about blood warm, or so it seemed, and the butter soft and white enough. No wonder, after all the experiments tried upon it, and all the beating it had received—but we learned a lesson by which we have escaped all such trials since that day. We get our cream *just warm enough* at first, trying it with the finger (which is better than any thermometer.) and churning moderately on commencing, warm up as we proceed, and soon bring the churning to a close.

If one has good cream in winter, they can make good butter. To get the first, one must have good, well-fed, and *comfortably* kept cows, an even temperature to raise the cream, and churn often before it gets bitter or rancid. But I have already given you my ideas on this branch of the subject, (Co. Gent, Oct. 28, 1858.) There is more in managing the cream properly than most people think there is—especially those who keep but few cows, and give no great attention to the subject. I would renew my expression of the hope "that our dairymen will favor you with frequent communications of their experience." A YOUNG FARMER. *Maple Hill, N. Y.*

Draining—Shallow Reasoning.

A prominent writer in one of our most popular agricultural journals, gives an article of some length, the drift of which is, that underdraining is a very expensive operation, and in most cases not at all to be recommended. He estimates the cost of drains at over fifty cents a rod, and at forty-five dollars per acre, where the drains are two rods apart, which is the greatest distance at which the full benefit of the operation can be received. He then adds that it would cost at this rate, "*five hundred millions of dollars* to drain one half of the improved lands of New-York and Pennsylvania, the interest on which sum would be thirty-five millions of dollars annually. How is this to be paid?" "By the increased production of the land, if at all. But if you should raise additional products sufficient to pay this interest, you would glut every market in Christendom—then the products would bring next to nothing, and so *the debt couldn't be paid at all!* The simple fact is, a general system of draining would produce universal bankruptcy."

Let us look a little into these headlong statements. New-York and Pennsylvania have together about 20 million acres of improved land. Now, how much must the products of one half these acres, or ten million, be increased to "glut the markets of Christendom"—to "produce universal bankruptcy?" The population of Christendom is over two hundred millions of people; and to fill the mouths of this multitude, so that "the products would bring next to nothing," there should be at least double the present amount of food and clothing for them all. At any rate, when the crops are greatly increased by favorable causes, they do not glut the markets to any extent, nor reduce prices to "next to nothing." The improved land of the United States is some 150 million—the population 25 million—the surplus very small comparatively. Now, let us state the sum according to the rule of three:—If a hundred and fifty million acres are required to feed and clothe twenty-five million people; how much must the product of ten million of these acres (one-fifteenth part) be increased to reduce the prices throughout Christendom to "next to nothing?" To increase the food and clothing of each individual among the 200 million, but one-tenth, would require, at the same rate, an increase of products on these ten million acres, of not less than twelve times their present amount;—that is, where 40 bushels of corn are now produced per acre, it would be necessary to increase the 40 to 480 bushels per acre; wheat, at 15 bushels, would require an increase to 180 bushels; hay, instead of being two tons per acre, would have to be twenty-four tons per acre, and so on. Our own practice has shown a high profit from underdraining; but we have never placed it at such magnificent figures as these. But the question may well be asked, if *one-tenth* in increase would produce any important effect on prices, much less "*universal* bankruptcy."

We have not intended to be very accurate—but only to give an approximation to the supposed result far within legitimate bounds—accuracy is not required to meet such wild fancies as we have quoted.

But supposing that crops *are* increased as stated, we do not believe this result would injure, much less ruin the people—but on the other hand positively benefit them. We do not believe that making slaves of farmers—requiring their utmost exertions year in and year out, promotes general prosperity. If on an average, two days labor are required to produce a bushel of wheat, neither farmers nor the rest of the community are so well off as when a bushel is produced by half a day's labor. Hence, the introduction of agricultural machinery,—of the plow for the spade, the horse-rake for the hand-rake, the mowing machine for the scythe, &c., not only benefits the farmer, but the influence of his prosperity is felt through all ranks of commercial society. If this result should *cheapen* farm products, then the mechanic and merchant are supported on less, and as a consequence, sell more cheaply to the farmer. If products are *not* cheapened, then the farmer gets more for his increased productions, while the mechanic and merchant give no more for their food than before. In either case, increased or cheapened products benefit all.

The logic of the writer whom we have quoted, deserves examination in another point of view. He objects to underdraining on account of its great cost,—asserting that to drain all the improved lands in the Union would cost "more than the United States,—including every man, woman and child,—is worth." The same kind of argument would apply to all kinds of agricultural improvement. There is a great deficiency, for example, in good farm buildings in this country, especially at the west. Now, a complete set of such erections for every farmer in the Union, estimating their cost at a thousand dollars for every hundred acres of *improved* land, which would be within bounds, would require an expenditure of Fifteen hundred million dollars—yet what enlightened farmer doubts the propriety and profit of good farm buildings? Again,—the live stock of the Union has cost in raising, more than Five hundred million dollars—but does this great expense prove the folly of raising domestic animals on the farm? Take another example,—the *fences* of the whole United States have been estimated at a thousand million dollars—what would have been said, then, of the reasoning, if adopted fifty years ago, that it would be folly to fence our farms on account of this enormous cost? It would have been precisely that of the writer we have alluded to, with one difference, namely, that underdraining often repays more quickly its cost than fencing.

For, in such lands as draining has been found to benefit, the expense, if economically conducted, has been returned on an average in two years by the increased product and increased facilities for conducting cultivation. This has been our own experience—it has been the experience of JOHN JOHNSTON of Geneva, who has underdrained his whole farm—and every one who has adopted a good system of farm management in connection with draining, with whom we have conversed, has stated to us similar results. The improved appliances lately adopted for lessening the expense of the operation, enables us to do it at half the expense estimated by the writer above quoted—but even admitting that thorough underdraining costs forty dollars per acre, it will not require $4000 capital to underdrain a whole farm, as would appear necessary at first sight. John Johnston has proved that with $500 he can drain any farm—in the following way: This sum will enable him to drain at first twenty acres; in two years, or at furthest, three years, the whole $500 will be returned to him in increased crops, enabling him to drain twenty acres more. The forty acres now completed, will return the third $500 in one year, when this capital is again applied, and so on till all is done. To estimate, therefore, the *cost* only of draining, without its returns, as this writer has done, is like the reasoning of the man who should argue against all farm labor on account of its cost—amounting, as it does, in the entire Union in a single year to about one thousand million dollars—and in ten years to a *million million*, "more," to use the words of the quoted writer, "than the United States,—including every man, woman and child,—is worth."

Such superficial, one-sided reasoning—reckoning the *expense* only, and leaving out the *profits*—may be used in favor of any position. We are satisfied that nothing is more needed in a large portion of our country for successful agriculture, than underdraining, and we are unwilling that any check should be given to it by such fallacious argument. There are many farming districts where it is not needed—where, for example, there is a porous gravelly subsoil, or where the soil itself is light and sandy. But in all clayey regions, or with a soil more or less tenacious—or where an impervious hard-pan subsoil exists—and in short wherever water is found to stand some days in post-holes dug in such soils,—underdraining will unquestionably prove highly beneficial. The propriety of adopting it extensively on such soils, is only a question of *time*—that is, where its increased products are small, or their prices low, a longer period must be given to effect it over the whole farm, by paying its own way

Composts—Muck and Night-Soil.

Chemical analysis, as well as actual experiment in the field and garden, have shown the great manurial value of human excrements and urine—a value very often wasted for all practical purposes. According to STOCKHARDT, the composition of human excrements, when derived from an invigorating but moderate quantity of animal and vegetable diet, may be assumed to be the following:

	1,000 lbs. fresh excrements.	Of fresh urine.
Solid substances in general,	250 lbs.	40 lbs.
Nitrogen therein,	7 "	10 "
Mineral substances therein,	16 "	11 "
Assimilated alkalies (potash and soda,)	3½ "	2 "
Earths, (lime and magnesia,)	5½ "	¼ "
Phosphoric acid,	5½ "	1½ "
Common salt,	⅛ "	2 "
Approximate value,	114	118

"Very accurate analyses," he adds, "have shown that the amount of urine" (voidod in any given time, comparod with the solid fæces,) "contains double the quantity of phosphoric acid, four times as much azotized substances, and six times as much alkalies and alkaline salts." The proportionate value is as 9 to 2¼, and the former deserves far greater care in collection, though it is most frequently allowed to run to waste.

"The soil procured from vaults upon country farms," says the author above quoted, "is most judiciously added to heaps of earth or compost, as it then soon loses its disgusting odor, and is converted into a pulverulent mass, which when mixed with earth can be easily scattered and equally distributed over the ground." Swamp muck, first dried, is one of the best absorbents and deodorizers which can be employed. Night-soil, on the other hand, is one of the best materials for decomposing and sweetening raw or acid muck, and the two together enable the farmer to manufacture a large amount of very valuable manure.

The subject has received considerable attention in former volumes of this journal—(practical directions in regard to collection and preparation of night-soil may be found in vol ix, p 345,)—and we only propose to cite an example or two of its employment. Mr. Brown's essay on swamp muck, relates of a gentleman, who in making a pond of a sunken place in his park, first pumped out the water, and then hauled out two or three thousand loads of muck, which he piled up in an oblong pile, three feet thick, leveled the top, manured and sowed on grass seed—raising two or three crops of grass thereon annually, and hiding what would otherwise have been an unsightly object. For many years this bank has been drawn upon with unvarying success—both for composting with night soil, and the common manure of the farm.

Small quantities of night-soil are obtained from a neighboring village; this is deposited at one end of the muck bank, when the latter is cut down perpendicularly and spread over the former, keeping the whole in a compact form. At short intervals, stakes are inserted in the heap, to be withdrawn after a few days in order to learn the degree of fermentation from the heat evinced. When the mass is sufficiently "cooked,' it is liberally applied to the land (being about nine-tenths muck) and is followed by the most abundant crops of oats, corn, wheat, and fruits. "A large fruit and flower garden is kept in the most luxuriant condition, mainly through the influence of discounts from this bank. Rare and beautiful exotics, figs, peaches, apricots, plums, and shrubs in great variety, all find in it that aliment, which with proper protection, returns the proprietor ample compensation for the care bestowed."

With little trouble or expense every farmer might secure fertilizing material of much value—better far than most of the commercial manures. In regard to one form of the latter—"poudrette"—if made at home, we may be certain of its value. Even Stockhardt found it necessary to warn his hearers against the purchase of dried human excrements under this name, without knowledge of their constituents from analysis—remarking that they were of extremely diversified composition. When our farmers, as a general rule, avail themselves of every fertilizing material of domestic production, there will be little need of going far for manure. Muck is so plentiful—its conversion into compost so simple and inexpensive—and its judicious employment so profitable—that we shall continue to urge it upon the attention of our readers.

Winter Food of Milk Cows.

A writer in the *N. E. Farmer*, Mr. Pierce of N H. says "it is well understood among our thinking farmers that green, early cut hay, or rowen, is the best fodder for producing milk in the winter months, or as soon as the grass shall have failed us." Feeding upon the frosted grass late in the fall will "invariably give the cows a back-set. A resort to wheat-shorts and corn-meal is the only remedy in this case." He advocates a change in farm husbandry, by which meadows and pastures shall receive much better attention and produce much better results,—a change which it were wise to introduce everywhere among Eastern farmers.

Destroying the Peach Grub, Wooly Aphis, &c.

MESSRS. EDITORS—I have a young orchard of peach trees which are somewhat injured by the worm at the collar. The trees are of one and two years' growth. Would the application of three or four quarts of boiling water or soap suds to each, kill the worm without injury to the tree?

I have some young apple trees of the same age with the peach, and also some just budded this season. They are attacked by the wooly Aphis. Would the application of boiling water or suds to them be of service without injury to the tree? If not, what is the best remedy? I tried sulphuric acid diluted, as recommended by Downing. It killed the Aphis, but it also killed the tree.

I have heard of the application of boiling water to the roots of peach trees of some age, and that it has proved of great service—is the reason of my inquiry—but I am afraid to venture without hearing something further on the subject.

I have heard of an instance in which boiling soap-suds thrown under a plum tree was followed by a large crop of plums—probably killing the curculio. I have thought the notion a good one.

Mr DICKINSON spoke in one of his communications, of making manure for his land by burning turf. What is the process?—how is the burning managed? ENQUIRER.

Hot water dashed around the bottom of a peach tree will not injure the tree, provided it has an opportunity to run off immediately, before it heats or cooks the bark to the wood, which would require some time, as the bark is a slow conductor of heat. As the grub only works in the bark, it is not improbable that it might be killed by hot water, without danger to the tree, if we knew the precise amount of time required to effect this object. It is so much easier and safer, however, to cut them out with the point of a knife, that we have always adopted this mode, and never have employed the scalding process. An active man with a knife will clear several hundred trees in a day.

The wooly Aphis may be removed by the use of soap-suds. Whale-oil soap is more commonly used on account of its cheapness, and is by some regarded as more efficient. Boiling water would kill the tree applied thus to the more tender and growing part.

No doubt boiling soap suds might be used to destroy the curculio, if applied just at the commencement of the puncturing season, when the insects are emerging from the soil, but it would obviously require a very large quantity to accomplish their complete destruction. For example, a pail holding three gallons of the boiling liquid, if discharged over a whole surface ten feet in diameter, would form a stratum only one-sixteenth of an inch deep, which would of course be instantly chilled before it could effect anything, and be wholly insufficient to penetrate the soil with its heat two or three inches, the supposed depth at which the curculios exist. Those only just emerging would be reached, and the process would therefore require many repetitions.

We should esteem it a favor if A. B DICKINSON would furnish a particular account of his mode of burning turf—which may differ from the common mode of mixing it with brush, rubbish, &c., when very dry, and reducing it by a slow fire.

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Why is the Bonchretien more like a span of race-horses than the Seckel? Because it is the *courser pair.*

Illustrations in Chinese Agriculture.

Extract of a letter from Rev. S. W. Bonney, missionary of the American Board in China.

MACAO, CHINA, April 1, 1858.

LUTHER TUCKER, Esq —When I saw you in July, 1856, I mentioned that I would send you some plates describing Chinese agriculture. On account of the war, I was not able to go to Canton where they are sold. Canton being now in the possession of foreign troops, there is admittance to the city for foreigners. A few weeks since I went up, and during my stay of five days purchased a few books.

I send two copies of a book on the cultivation of rice, and manufacture of silk, which please accept as a small addition to your agricultural library. As soon as the treaty is made, we hope to travel in the interior, and see more of the agricultural systems of the Chinese, while we teach them that system of religion which their Maker has revealed in the person and mission of Jesus Christ, their only Savior. I doubt whether much can be learnt from the Chinese mode of agriculture that will be applicable in our country. The Chinese farming is more like the cultivation of large vegetable gardens, because the density of the population requires them to make the most of the soil that is possible. In our country there is abundance of land, which need not be used penuriously. Our country abounds with hills, mountains, and valleys, and is not intersected by a net-work of streams and canals as will be found in China. SAMUEL W BONNEY.

Mr. BONNEY will please accept our thanks for his interesting present. Although we can scarcely hope to profit much from the descriptions accompanying the plates—as the Chinese have a singular way of beginning their books at the last page, and using a little different kind of characters from those generally in vogue where English is the language spoken—he has been kind enough to add a heading in manuscript to the plate pages, so that their meaning is perfectly clear, and we may have some of the pictures they contain engraved for the benefit of our readers.

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Seed Wheat from the South—Corn from the North.

In the Co. Gent. of Nov. 4, page 292, appears the *theory* of an anonymous correspondent, signed J. W. C., to prove that the north cannot *hasten their wheat harvest* by the use of southern seed. As one single *fact* is worth all the *theories* ever printed, I will state some *facts* in growing wheat and Indian corn.

In August, 1856, I determined to make an effort to ripen my wheat crop in time to escape rust, the most fatal disease to our wheat in this section of Kentucky. My location is in the extreme northern part of the State, in latitude 38¾° north. The soil strong, calcareous uplands, dry and very productive. I sent to Nashville, Tenn., for three bushels of "Early May Wheat" for the experiment, and sowed it on hemp stubble Sept 15. Nashville is in latitude 36¼° north 2½° south of my location. The experiment was a decided success, my wheat ripening June 14th—just two weeks in advance of our acclimated varieties, and free from all disease—straw as bright as gold—and surrounded by rust of the worst character in all the later ripening kinds. And this early ripening continues to the present time. This year 250 acres were grown from this small beginning, and all yet free from disease, and weighs this year 62 lbs per bushel, when all the later kinds, from the effect of rust, weigh from 54 to 57 lbs.—much shrivelled and unmerchantable. The entire crop of 250 acres has been sold for seed in this county, and is now well disseminated. All efforts to ripen our wheat early by sending *north* for seed, have signally failed in actual experiment, and always will fail. The ripening of the crop in any given latitude *can be hastened only by sowing seeds from a more southern latitude.* I have removed an early wheat 2½° north, and it is now ready to go 2½° farther north, which would take it up to about the latitude of the line between New-York and Pennsylvania. For me to say that it would succeed if taken there, would only be theory. The proper way would be to test it. If tested, I shall not fear the result.

Now for the Indian corn. Last year our farmers suffered severely from soft corn, owing to late ripening and early frost. Opposing theories prevailed. Says A. if we want to ripen our corn earlier, we must send north for seed. Says B., we must send south. And consequently A. sent to New-Jersey and purchased the 8-rowed yellow, and B. sent to Nashville and got the southern gourd seed. These northern and southern varieties were cultivated side by side in this latitude this present year. The northern proved itself the earliest ripener, being in good feeding order by the 15th August. The southern proved a very late ripener; thus in practice proving the *reverse* of the wheat experiment, and demonstrating that for early ripening of Indian corn in any given latitude, the grower must go further north. The views of C. M. CLAY, as expressed in the Co. Gent., that for early maturity in corn, go north for seed, and for wheat, go south, are absolutely *demonstrated*, independent of all theories. Why it is in *practice* that the same rule will not apply to both cereals, I will leave for the theorist to explain as best he may. ANTHONY KILLGORE. *Mason Co.,*

Point Judith Bronze Turkeys.

EDS. COUNTRY GENTLEMAN—A short and hastily written article of mine on turkeys, having been copied from the "Dollar Weekly Newspaper" into the "Country Gentleman," has made me most suddenly and unexpectedly the subject of a very extensive correspondence; and as I may be subjected to still further queries, and your paper having such an extensive circulation, I will, with your permission, answer through your columns all that can be said or written on this subject.

The turkeys raised by me are the Bronze turkeys of Rhode Island, or more properly that part of R. I. called Point Judith, where large flocks of them were formerly raised. Their color is similar to the wild turkey, from which stock they have undoubtedly been very closely bred, and kept remarkably pure for a great length of time, until they have lost all their wild nature and are the tamest and most domestic of fowls. Far as my research has led, and I have been a breeder of choice stock for many years, they are the largest, noblest and hardiest of all domestic poultry. The plumage of the cocks is the richest bronze green, as changeable as a peacock. My old gobbler weighed last spring, not fat, 28½ lbs.; hens, not the largest, 18 lbs. I have from different hatchings, raised about ninety this season, and young cocks running about unfed, weigh now, alive, 18 and 20 lbs.; hens 12 and 14 lbs. These young birds will easily fatten by Christmas—cocks 25, hens 18 lbs; but the best plan is to keep these young cocks a year, and then they will fatten 25 lbs. dressed. I find no difficulty in raising most of the number hatched, on the plan stated in the "Dollar Weekly," i. e., plenty of nice fresh curds, fed several times a day when first hatched; as they grow older, plenty of cracked corn, dry.

When my hens begin to lay in the spring, several will often lay in the same nest. We bring in the eggs every day, and when one hen shows a disposition to set, we take her to the barn, and in a dry, sheltered corner put up a few lath to confine her in, and in a box give her 15 eggs; and so on with the rest of the hens as they desire to set. In this way the turkeys are protected from storms, the eggs kept dry, and nearly every egg is hatched. When all the chicks are out, a a crate is provided with a tight top or roof, and the old bird confined, allowing the chicks to run about. After the young have become fattened, the old birds can be turned out; and if they have an extensive range with woods, they will require but light feed once a day, until they come up about the barns in October, when, to get great size and weight, they must be highly fed on grain.

This strain of turkeys bring high prices for breeding, in this vicinity. I have paid six dollars for a gobbler, when I wished to change the strain, and I have a famous gobbler now that twenty dollars would not buy

There is just as much difference in fowls as in other stock, and their good points can be just as easily brought out by judicious selections and crossings. After many years' trial I am satisfied with Point Judith Bronze turkeys and the *best Grey Dorking fowls.* P. W. HUDSON. *Manchester, Ct.*

EDS. CULT & Co GENT.—I enclose two recipes which I have found very useful in my family, hoping that they may prove equally so to some of your readers. If you find them acceptable, I may from time to time, give to inexperienced housekeepers, through your columns, some suggestions of which I should have been very glad, when I commenced my duties as the mistress of a family.

A Plain Pudding.

Six ounces of flour, a half pint of molasses, a half pint of whortleberries in the season for them, or Zante currants in winter, one small teaspoonful of saleratus, a little salt, and one egg. A piece of suet the size of a small egg, is an improvement, but not necessary to make an excellent pudding; boil in a cloth an hour and a half, and eat with any sauce that is preferred.

Soap for Chapped Hands, &c.

Take one bar of yellow soap; cut it up small; add to it the gall of a beef; put it over the fire until the soap is entirely melted; (a farina kettle is the most convenient vessel to melt it in;) then add one ounce of fine pulverized saltpetre and one pint of alcohol; pour it into a vessel (previously greased,) of a size to make the soap at least one inch thick. When firm enough to cut, before it hardens, cut it into cakes of a convenient size. This soap will be found excellent for taking grease spots out of woolens and silks, and is a capital preventive of chapped hands.

[Our correspondent will accept our thanks for the above, and the assurance that we shall be pleased to receive the suggestions to which she refers. We will add that contributions to this department of our paper, from our lady readers are always very acceptable, and we wish more of them could be persuaded to write for it.]

Wintering Calves—Costiveness.

It is not difficult to winter a healthy calf. Good hay, shelter, water, and daily care is all that is necessary. But that care must be founded on considerable knowledge of the animal economy, if we would keep all the functions of the calf in correct and healthful action. During our rigorous winters, it is frequently thought necessary to give calves a small supply of grain, which usually has a tendency to bring on disease rather than prevent it. They are almost certain to become painfully costive in mid-winter, and then need some aperient drinks, or what is better, succulent food, like roots or fruit. Every calf in our northern climate should receive during the winter at least one carrot, turnip, or beet, per day, to keep its bowels in good order. If nothing else offers, give them potato and apple parings, cabbage leaves, and the like—at all events give them a larger cash value in roots than grain, and note the result.

Any observing farmer has seen abundant evidence at this season, in the droppings of his calves and their daily loss of flesh, that they were not in health. The means usually adopted to remedy these evils too often but increases the cause, and though the animal may be wintered, it will be at a much increased expense over the proper way. Were we to prescribe remedies for loss of flesh, the pest of lice in calves as well as costiveness, we should base every dose on roots—green food in some form. But costiveness, prevented or cured, the other evils are seldom known.

In summer and autumn also, costiveness should be guarded against. A change to fresher pastures, if possible, is one of the best remedies in the case. It should be remembered also that it is important to bring them in good order into their winter quarters, for "an animal well summered is half wintered."

Voluntary exercise is beneficial—we always consider it an omen of health and thrift to witness a playful habit in calves during the winter, and would provide in all cases a sheltered, well littered yard, and allow them access thereto a portion of every day not excessively stormy.

Raising Large Crops of Corn.

If I wanted to see how large a crop of corn could be grown on an acre of land, I would like some of the small varieties—probably the "King Philip"—and put it in drills two feet four or six inches distant, and on an average one kernel every 4 inches in the drill. I would take some of the warmest loam resting on clay subsoil that had been in clover two years; would make the drill marks with a corn plow of a good depth, and would then proceed to fill the drills with well decomposed compost, not less than 30 loads per acre, and thoroughly pulverized in the drill. I would then cover the manure with one inch of soil before dropping the seed; and finally, in covering the seed be careful to see that all the manure is well under cover. The culture throughout should be three dressings, both with horse and hand-hoe.

Now, Messrs. Editors, please tell me where I err in the above programme, as I have no doubt I do.

For very strong land, highly manured, is it too thick—as you know the Philip has quite a small, low stalk; and would you not prefer this to a larger variety, and a greater distance apart? I am fully "open to conviction" W. J. PETTEE. *Salisbury, Ct.*

Our opinion accords nearly with that of our correspondent. We have raised more corn per acre, side by side, of the King Philip than of larger sorts, *provided* the former was planted close enough to compensate for its small size; but so much smaller was its stalk, that every farmer on seeing the crop confidently but erroneously pronounced the larger corn much the most productive. We have observed several instances of this mis-judging, where accurate measuring was not resorted to. We are inclined to think that 6 inches apart in the drills would be safer and better than 4 inches, but would like to see both distances tried and the result reported. Drills 2½ feet apart, and 6 inches in the drill, would give about as many stalks per acre as hills 3½ feet apart with 10 stalks in the hill—which would be a great number, and if every one bore two good ears, the crop would be heavy. Unless in the richest soil, even this would be close planting.

We perceive no necessity for covering the compost with the inch of earth.

We would cultivate the drills with a horse hoe once a week from the time the corn was up till too large to admit the operation; and with the hand-hoe only often enough to clear the weeds. Because horse cultivation is ten times as efficient and useful for the same cost, and the oftener repeated the better.

The Horse—His Education.

"Behold, we put bits in the horses' mouths, that they may obey us; and we turn about their whole body."—JAMES, iii., 3.

Perhaps no animal has been bred with more care or greater skill than the horse, and, as a recent author says, "it is very strange that his education has been so shamefully neglected" How often do we see horses whose actions show that they were badly handled, and that they have received bad management since. Some will not stand while a lady is getting in or out of a carriage; others will not back a carriage—or if they do back it, they will start and run back two or three rods; others will not obey the reins without considerable resistance; others want to run down hill and go through numerous movements; showing plainly a bad system of education, and being a living monument of shame to the man who trained them. Training horses—like any other branch of domestic husbandry—has been done with little or no regard being given to the best way of doing it, or that most in accordance with reason and humanity.

The horse was supposed to be deficient in intelligence and practical instinct, and was therefore used simply as an animal devoid of any feeling of reason and judgment. The system of education or training given to him, has been a hard and an unjust one. He has been *licked* and *driven* to perform everything, and if he did not do it, has been beaten for that. His masters have in many and almost all instances, regarded him as not capable of knowing and appreciating a kind act; consequently they force him against his will to do every service they require, whether contrary to the animal's principles of instinct and right or not. A man of my acquaintance went out one morning to catch his horse, which he did without any difficulty; but seeing a gap in the fence that wanted putting up, he loosed the horse and mended the fence. After this he had some troule to catch him again, as the horse had no idea of being fooled in that way, but at last he succeeded; and when he did get him, he was going to pay him for his contrary behavior, and so gave him a pretty severe whipping. The consequence is that now when he goes to catch his horse, he carries a handful of salt or a dish of oats, and then very often has a hard time of it. Now, in which was reason the most lacking—the horse or his master? I have a horse, and whenever I go into the pasture to catch him, if he sees me, he meets me half way. I carry no oats, I take no salt. Kindness is the only thing I use.

In educating the horse, let us first educate his master; this done, we can proceed. A writer on the horse, and his manner of being trained, says: "Those who are stupid enough to wonder whether the horse thinks or reasons, can never successfully manage him, from the fact that they can't comprehend him. The first step, then, in educating the horse, is to educate the teacher in regard to the instincts and general characteristics of his pupil; and the very first chapter in this lesson, and the essential one of all, must concede the fact that the horse is a thinking and reasoning being. He and his teacher think differently and reason differently, because one is governed more by instinct than the other; but no man will ever be successful in training the horse, if he doubts that he both thinks and reasons."

This done, this point admitted, and the master wishes to appeal to the thinking and reasoning faculties of the horse—so to speak—or to his natural instincts, of which, as I have said before, he possesses more than any domestic animal.

The education of this animal should begin with him when a colt. It always seemed to me to be very inconsistent and impracticable, that while farmers handy their oxen when steers, and train them to the yoke and the cart—they should neglect their horses until three or four years old, and then *break* them; and ten chances to one if their constitution or their necks don't get *broke* at that. It would injure the constitution of the colt a year old to put harness on him, and train him to that, no more than it would to yoke steers at the same age, and handy them as all good farmers do The common idea that it makes them unspirited and mulish, is absurd and incongruous. The colt should be trained to the harness, and at the age of three or four years, when in full vigor of strength and activity, he should be completely disciplined—though not put to hard work or constant service; but at the age of four years farmers should work a colt as much as they work a yoke of steers of the same age.

Let the law of kindness govern all the actions of the master in the education of his horse; if this is done both will have better feelings, and the horse will have a stronger attachment for his master. If the whip is to be used, let it be used at the proper time—but be careful in its use. The horse knows the will of his owner, and if he does not do it he expects a punishment. If he receives this once, or even twice, it will lead him to obedience, provided that when he does obey he is kindly treated for so doing. Of all the most cruel practices, that of licking a horse for doing or not doing a thing, *after* he does or does not do it, is the most inhuman. If you want your horse to go and he does not, and if after coaxing he refuses, then use the whip; but after he begins to go stop—don't lick him then because he did not go before, for he will know that you are licking him without a cause and as a punishment; when in fact if he begins to do what you want him to, why inflict a cruel and inhuman law of punishment?

I think there is often a wrong import put upon the word *break*. As has been well observed, we need to "break" a colt of nothing but his bad habits, and naturally he has but few of these—bad management has given him the rest. We do not "break" a horse to the harness, any more than we break a school-boy to grammar. The horse wants teaching, and being attached to man, it is natural for him to obey and love him.

Let love have full sway; let the law of kindness and humanity be your guide and teacher; acknowledge the horse to be a thinking, reasoning, and intelligent animal; and with gentleness and patience you can teach and train your horses, without paying five dollars for a bogus receipt, or fifty cents for some worthless pamphlet. S. L. Boardman. *Brookdale Farm, near So. Norridgewock, Maine.*

Culture of Oats.

Messrs. Editors—Your remarks on the culture of oats, have led me to give you the way we raise them in this part of Connecticut. We take land that has been cropped the year previous with corn, potatoes or buckwheat—the corn and potato ground manured before planting. We sow oats the first thing in spring, as soon as the ground is dry. Some farmers I think are a little too early, sowing before the heavy rains in spring, which leaves the top baked by the sun. I have seen fields where the seed did not all germinate—whether from exposure to the cold wet ground or from the baking, I know not. But there is one error that all farmers should rid themselves of—that is plowing too shallow. They have the notion that by plowing in the seed, the oats will stand dry weather better than by plowing to the depth of seven or eight inches, and then harrowing in the grain, which is my practice. If plowed twice it is not skimmed over the top of the ground, which must be the case if the seed is covered by the plow. The product on land manured the year before, is from 40 to 80 bushels per acre. Never practice sowing on inverted sod, and never manure for oats. Have sowed with plaster, which I think did well. J. H. B. *Newtown, Ct.*

To the Transmutators of Wheat.

Eds. Co. Gent.—I have a piece of land that has been in my possession for twenty-five years, and during all that time there has never been wheat sown upon it till 1856, nor do I believe there was any wheat sown upon it since it was cleared. In the fall of 1856, one-half of it was sown in wheat and the other half in rye, and laid down with timothy. When the grain was cut last year, there was a great deal of cheat in both lots —as much in the rye as in the wheat, and this year as much in the timothy as in either wheat or rye. Now I want to know that if wheat transmutes, what objection there is to rye, or even timothy, to transmute. There is one thing certain—that part of our fine cheat crop did not originate from wheat. Pittsburgh.

How to Manage a Fifty-Acre Farm.

Messrs. Editors—This question is asked by "A Farmer," on page 299, vol. ix of the Country Gentleman. I have long looked for an answer from some one who believes farming so profitable, believing it would oblige many other farmers as well as himself. I cannot give him the required information, but will renew the inquiry. In the first place, I think $60 per acre, for 50 acres that will produce 50 bushels of corn and oats per acre, and 15 bushels of wheat per acre yearly, near a good market, quite low. The sales, as he reports them, amounted to $485, without allowing anything for bread, seed or feed. These would lessen it $200 at least; this would leave him $285, and he expects his interest, taxes, and farm bills to amount to $700. This would leave him $415 behind. Profitable business, truly! Will some one explain how he is to make up the deficiency? J. W. Lequear. *Frenchtown, N. J.*

We are gratified in being able to transfer to our pages, in answer to the above, the following article from a recent no. of the "Dollar Newspaper." There is a strong contrast between the products of the two fifty acre farms—the one amounting to only $485, while the other rises to $2,232.84 The owner of the former, we may venture to say, did not find "farming profitable," while the owner of the latter, it would appear from the following statement, with a capital of but $600 to begin with, has in twelve years time made enough from his fifty acres to enable him to erect new buildings and new fences, and to pay the entire original purchase money and interest, with a surplus of over $5,000 to loan. How this was done is told in the following article:

I have a little farm of fifty acres of land which I own and occupy, and in the enjoyment of which I am as "happy as a king," and would not. if I could, exchange situations with the highest dignitary in the land, not even the President of the United States. The cultivation of this farm affords me employment of the most interesting kind, and exercise for both mind and body, alike pleasing and healthful. My farm buildings are plain, but convenient and substantial, and are located near the centre of my grounds, on an enclosed plot of land. containing about two acres, occupied also as a garden and fruit yard. I have now growing, and in bearing condition, in my fruit-yard on this plot, fifty apple trees of the best variety, ten standard pear trees, ten cherry trees, twenty plum trees, thirty peach trees, three apricot trees, two mulberry trees, six quince trees, one chestnut tree, one walnut tree, two filbert trees, a row of currant bushes, a row of gooseberry bushes, a row of raspberry bushes, and four grapevines. I have also a moderate sized lawn in front of my dwelling, containing a number of shade trees, and also embellished with a few fine specimens of flowers and shrubbery, arranged principally along the avenues.

Twelve years ago I purchased this property for five thousand dollars cash, (the whole amount of which was kindly loaned me by a friend,) and commenced my farm operations with only six hundred dollars cash of my own money. With this six hundred dollars I stocked my farm with two working horses, three milch cows, three yearling heifers, six shoats, twenty barn fowls, a two-horse farm wagon, a plow, a cultivator, a harrow, a fanning-mill, cutting-box, &c., and purchased my horse feed and flour for bread on credit for the first season. The fences were all very poor, and the buildings old and dilapidated. These buildings I have since torn down and erected new ones near the centre of the farm, as before stated, and have my fields now enclosed with good post and rail fences.

In the beginning of my farm operations I adopted the following system of rotation of crops and general farm management, and have adhered thereto strictly up to the present time, and, by my success in the business, have been enabled not only to repay my friend the money he loaned me, but in addition to this, have had the means to return him the favor, by a loan of a still larger sum, which has enabled him to avoid a heavy sacrifice and survive a misfortune which otherwise would have crushed him.

To return to my subject: I divided my farm into four fields, of twelve acres each, in one of which I planted corn, and at the last dressing of the corn sowed clover seed over the land, at the rate of about one bushel to five acres. In the other field I sowed oats very early in the spring, and, at the time of seeding the oats, sowed over the field four bushels of grass seed, timothy and clover mixed, and of each about an equal quantity. In one other field I sowed winter grain, principally wheat, and over this field sowed, in the following spring, about three bushels of clover seed; and one field I kept for grass and hay. I plant my corn on the wheat and rye stubble-field early in the spring, and manure the ground plentifully before it is plowed. I have always considered the sod of young clover, which I plowed in with the manure, a great benefit to the corn crop. My wheat I sow on clover sod after two plowings, the first plowing deep, the second shallow, and after the first plowing apply to the land, a coat of lime and a heavy dressing of manure, and harrow both in together previous to the last plowing. About the 10th of September I sow my wheat and harrow in. By this mode of management, I have the benefit of young clover sod for my corn, also for my oats, and an old sod for my wheat; and I consider this method the easiest and cheapest to enrich the land of any other, as, without any other manure, the grass lay alone would keep up the fertility of the land and insure good crops. I never turn my cattle, horses or hogs in my grass field to pasture, as I can keep them all better in the stable or yard, on one-third of the grass they would thus consume and tread under foot, and destroy. I would almost as willingly turn my hogs to fatten in my corn-field, as to allow my cattle to run at large and pasture in my field of grass. I mow grass and feed them in the stables and yard three times a day, and while they enjoy their food much better in the shade, they are all at work all the time, in manufacturing dung of the very best kind; and the quantity they make is sufficient to enable me to manure twenty-four acres very heavily, to wit: twelve planted with corn, and twelve sown with winter grain. Indeed, I consider this method of feeding farm stock, one of the most important parts of good farm management. But I know there are objections made to this, on various grounds; but after all, the only objection in reality is, that it is "too much trouble." If this plan is pursued there will never be any need of guano on a farm, or any other artificial fertilizers. In truth the farmer can in this way often make more dung than he can safely use, without endangering an overgrowth of his crops, especially the wheat crop, which is injured by an excess of stable manure.

I am careful to keep an account every year of all the products of my farm, and of the quantity and value of each article sold. And I send you hereto annexed a statement of the articles sold for last year, 1857, and omit what was retained for family use, feed, seed, &c., &c.. viz:

Corn,	sold	824	bushels,	at 60c.,	$494	40
Oats,	"	632	"	at 35c,	221	20
Wheat	"	376	"	at $1 10,	413	60
Ryo,	"	25	"	at 70c.,	17	50
Hay,	"	10	tons	at $15,	150	00
Butter	"	743	pounds,	at 20c.,	148	60
Apples,	"	324	bushels,	at $1,	324	00
Pork,	"	3,642	pounds,	at 8c	292	36
Eggs,	"	174	dozen,	at 15c.,	21	00
Cherries,	"	315	quarts,	at 6c.,	18	90
Currants,	"	316	quarts,	at 7c,	22	12
Peaches,	"	60	baskets,	at $1.25,	75	00
Gooseborries,		427	quarts,	at 8c.,	34	16
Total cash receipts,					$2,232	84

I also keep an account of cash outlaid for farm labor, &c., which for the year stated, 1857, amounted to a little over three hundred dollars, leaving me nearly two thousand dollars nott profits for the one year, and that too when the prices of grain, and all farm produce were unusually low. Industry. *Philadelphia Co., Pa.*, 1858.

Recipe for Artificial Honey.

To 10 lbs. crushed sugar, or good coffee sugar, add 3 pints of water; scald and skim; then add 3 lbs. good strained honey, 4 grains of cream of tartar, and 10 or 12 drops of the essence of peppermint. Mix the whole intimately, and it is ready for use.

Many prefer this mixture to pure honey, as it can be eaten by most persons who cannot eat honey without injury. D. S. Heffron. *Utica, N. Y.*

Wintering Sheep.

Eds Co Gent.—Perhaps a few hints on the best manner of wintering sheep economically and profitably, will not be out of place in your columns; and it may be that the experience of the writer will be of use to your readers or some of them.

It is well known that sheep or cattle eat more in cold weather than in warm; that extra food is required to keep up the supply of animal heat during cold and frosty weather. It is necessary, therefore, that good warm sheds or stables be provided for the sheep, capacious enough for the hay-racks to be under the same roof; and that the sheep have plenty of room. A shed 40 by 20 feet, is ample for 100 sheep; with the racks all round on the inside. Such a shed, with double roof and 12 or 14 feet posts, will give storage enough over head for all the hay needed for the flock; and the hay can he dropped down directly into the racks through scuttles, thus preventing waste.

The sheep should not be allowed to run out of the yard—at least not on grass ground; for at every warm spell, when the ground is bare of snow, they will not eat hay if allowed to run on pasture or meadow, and will invariably lose flesh. They should also have easy access to good soft water every day; they *can* do without water by eating snow, but they do not winter as well. One of my neighbors, who owns two farms a mile apart, and depends on a tenant to take care of the sheep on one of them, says he can tell if his tenant has neglected to water the sheep, within two or three days after, by the appearance of the flock; the bad effects of a want of water showing themselves in that short time. Good troughs must be provided for grain to be fed in; and the sheep ought to have at least half a gill of corn—or its equivalent in some other grain—each per day. They will not eat so much hay as they would if no corn was fed, and the weight of the fleece is increased by it, thus getting double pay for the grain. Of course, sheep intended for the butcher shonld have more grain, as this allowance would not fat them, hut merely increase the weight of the fleece. Sheep fed under cover eat only about two-thirds as much hay as when fed out of doors. This saving of fodder will nearly pay for the sheds in three years, and is one source of profit in wool-growing. It costs about 50 cents per head more to winter sheep when the hay is fed in racks out of doors, than when they are in the sheds. Every lock of hay that gets wet will remain untouched, and of course is wasted. Sheep must have dry hay, or they will starve before spring; and if they do not die they will inevitably lose their wool before shearing.

At least four weeks before yeaning time, the ewes should have roots daily, or, what is better, good clover hay. If the ewes have clover, their udders will be as full of milk as when in the pasture, and not a lamb will be lost for want of sustenance.

When hay is $8 per ton, corn 75 cts. per busbel, and salt $2 per harrel, it costs about $1 50 per head (washing and shearing included,) to keep sheep a year. Good Merino sheep well wintered, and fed some grain, should yield about 5 lbs. of wool per head; and the lambs would be worth about $2 per head at weaning, on the average. The net profits of such a flock would be not far from $1 per head, showing what good care in the selection and management of sheep may be made to accomplish. D. A. A. Nichols

Increase of Weight in Hereford Steers.

Messrs Tucker & Son—As facts relating to cattle of *any breed* are interesting to practical men, I send you the weight of the sixteen steers sold to Mr. James Van Alstyne by Mr Geo. Clarke. They weighed when purchased in New-York,

Dec. 10th, 1857, averaging,	1262 lbs.
Aug. 6th, 1858, at Ghent, Col. Co.,	1695
Oct. 29th, " " "	1765
Nov. 23d, " " "	1803

This shows an increase for less than a year of 541 lbs. They were fed six quarts of cob and corn meal during October when on grass, and in November 12 quarts, in addition to their grass. This is not extraordinary, but I think a remunerating price for feeding. I saw the last weighing, and took the three former ones from Mr. Van Alstyne's book with the latter. If any Short-Horn breeder can show a more uniform lot of steers, in "*color*," symmetry, size, and weight with compactness, with less offal, I should be glad to see them produced. These steers will probably be sold to one butcher. If so, I will endeavor to get tbeir weight of hide, tallow, and carcass, for the benefit of your readers, as this is the true test of quality and the profitableness of animals. Wenever you find the least shrinkage in offal, you find less consumers and more beef for food consumed; of this fact I have been satisfied for many years, and was one of the important reasons for my adopting the Herefords. W. H. Sotham. *Owego, N. Y., Nov.* 26, 1858 [See Mr. H.'s advertisement in this paper, p. 273.]

Product of Bees.

Messrs. Editors—I will give you an account of the profits of my bees this year. I wintered over last winter, 69 swarms, in good condition, and from these 69 stocks of bees I took this summer and fall, 2535 lbs. of pure box honey—2400 lbs. I sold at Canandaigua for 15 cents per pound, to be shipped to New-York, Some of my best stocks made six boxes full of honey, which weighed 72 lbs. I got 20 good young swarms, which I value at $5 apiece.

It was a poor season for swarming this year, and not so good for making honey as some other seasons have been since I have kept bees.

I use the kind of hive recommended by Quinby—a common box hive, made 12 inches square inside by 14 deep, with ten inch holes in the top, and then the boxes and a cap over them, as described by Quinby in his "Mysteries of Bee-Keeking."

As for millers and worms, the best and only way to get rid of them is to pinch their heads. Eugene Lewis. *Ontario Co., N. Y., Nov.* 15.

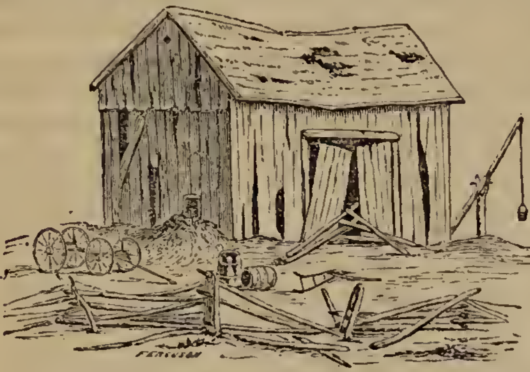
Crossing to Improve Fowls.

The second premium for the largest and best collection of fowls at the Mass. State Fair, was taken by E. F. Hollis of West Needham. They were a mixture of pure bred fowls with the common kinds, and by a judicious course of crossing, pursued for years, had been brought to a high state of excellence. Mr. H. secures a pure bred Dorking cock, and selects the best formed hens of his own stock, rejecting every pullet which has not all the requisite qualities. The same course is adopted by many farmers, and where early maturity for market is desired, is very judicious. Only the Dorking, Spanish, or game cocks, should be employed.

Farm Management.

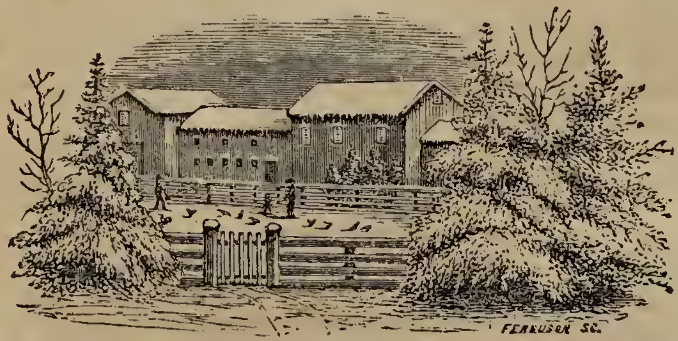
[We have already mentioned that Mr. THOMAS' "Essay on Farm Management" appears, re-written and enlarged especially for this purpose, in the REGISTER OF RURAL AFFAIRS for 1859. The introductory sketch with which he opens the subject, together with its graphic illustrations, are copied below, and will give the reader a foretaste of what may be expected from the whole.]

It is an interesting subject for inquiry, why different men with the same opportunities, variously fail or succeed, after years of equal labor. One will become rich, the other poor, on the same piece of land. One has had continued prosperity, and doubled or tripled his capital. The other has met with nothing but difficulty, misfortune, and "hard times." Instead of increasing his capital, he has become heavily involved in debt. His farm has run down and diminished in value. Altogether, he has come to the conclusion, that except with a *lucky few*, farming is a very hard, slavish, nonpaying occupation.



SQUIRE SLIPSHOD S BARN.

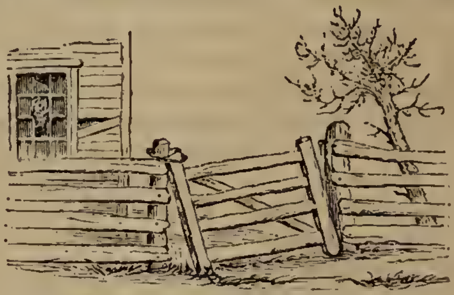
His successful neighbor on the other hand, has adopted a very different opinion. His crops are good, with scarcely an exception—his fences impenetrable—his fields without a weed—his farm-buildings and barn-yards models of neatness—his cattle and sheep richly marked with improved blood, in fine condition, and eagerly sought in market at high prices—his fruit trees are bending under their rich loads, and his dwelling and door-yard a gem of rural beauty. He has "not quite yet" concluded to give up the business of agriculture for feverish speculation, nor for the close, pent-up, and anxious life of city trade.


FERGUSON SC.

FARMER THRIFTY'S BARN.

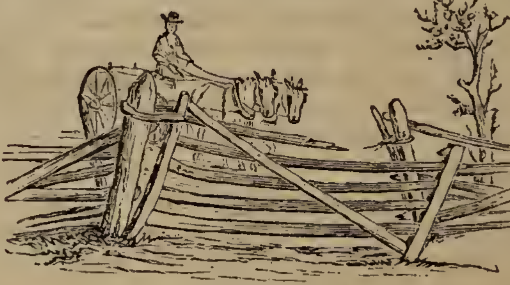
There is no lack of examples of both of these kinds of farming. The writer knows two men, now under fifty, who began active life in farming at about the same period—the first with very little property, the other with a beautiful hundred-acre farm. The first in less than twenty years had accumulated enough to buy seven hundred acres of the best land in that fertile region, and his average nett profits were between four and five thousand dollars a year. The other, with the fine hundred-acre patrimony, has worked equally hard, but he had not an acre left him, and was insolvent.

Nearly all our readers are acquainted with two similar cases—those of *Farmer Thrifty* and *Squire Slipshod*. They will therefore recognize at once some of the accompanying roughly sketched portraits. Squire Slipshod's barn was originally the best in the neighborhood, but motives of economy have compelled him to omit some repairs he would have otherwise been glad to make—and he has become disheartened since he has discovered that boards and shingles become detached more easily than from the buildings of his neighbors. He has adopted a cheap fastening to his barn-doors, which, from its security, compels him to leave his wagons and tools outside. He especially wonders why Farmer Thrifty's barn and fence "keep in such good order."



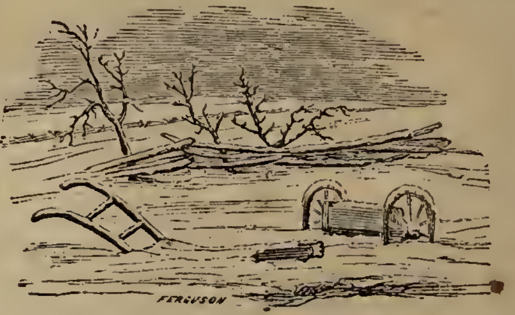
THE SQUIRE'S DOOR-YARD GATE.

The Squire's door-yard gate is the best gate on his premises; although the hinges are a little imperfect, causing it to diverge from the post at the bottom—the only inconvenience of which results from the street pigs, which are constantly thrusting themselves through.



CARRIAGE GATE.

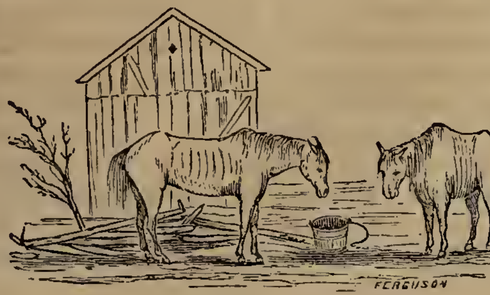
The carriage-gate is scarcely inferior to the one just described, but possesses opposite qualities, gaping open at the top instead of the bottom.



THE SQUIRE'S MODE OF WINTERING TOOLS AND IMPLEMENTS.

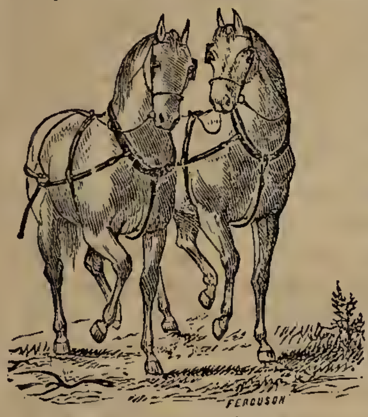
His mode of wintering tools and implements is not peculiar to him, but has some advantages, the main one being a saving of care and labor.

The Squire will not admit that his favorite horses are in any respect inferior to others, except it be that Farmer Thrifty's are a little fatter—which is more than balanced by their high feeding and pampered keeping.

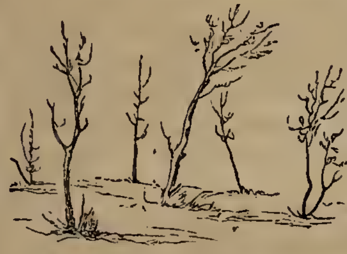


THE SQUIRE'S HORSES.

On these two points he confesses to have been unlucky. One is in his young orchard, which has never flourished so well as that of his more successful neighbor, but he will not believe that this difference arises from anything else than *luck*, although he never gives his orchard any cultivation. Raising *pears* he regards as a humbug, as such varieties as *he* has planted, with his peculiar management, which he thinks "good enough," have given him specimens like fig. 1. He cannot, however, account for the good luck of his neighbor, whose entire crop was similar to fig. 2.

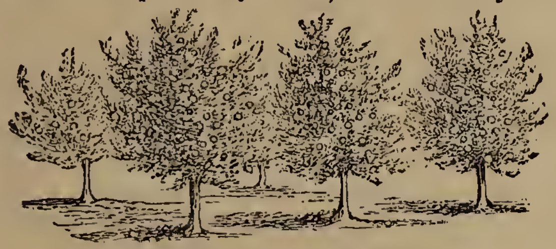


FARMER THRIFTY'S TEAM.



THE SQUIRE'S YOUNG ORCHARD.

The other point in which he admits his inferiority, is in his corn crop, from which, although his land is comparatively fertile, he obtains only about ten bushels of corn per acre, while the Farmer usually gets from fifty to seventy.



FARMER THRIFTY'S YOUNG ORCHARD.

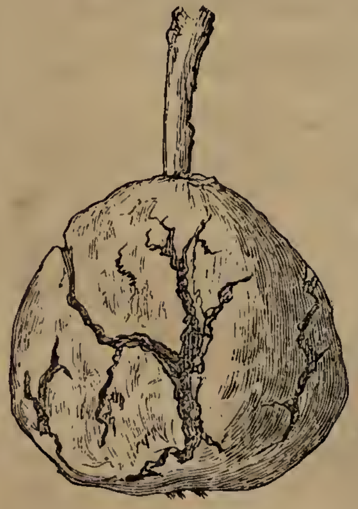


Fig. 1.

Now the question very properly occurs, what should cause so great a difference in the farming of two neighbors — one always prosperous, the other as uniformly unsuccessful. The answer is an interesting and important one, namely, *difference in* MANAGEMENT. It is not the amount of labor expended, but the way in which this labor is directed. A man may work hard for days together, in carrying a hogshead of water, by repeated journeys, in an egg-shell; or by efficient appliances it may be conveyed the same distance in a few minutes. One may fatigue himself to no purpose by taking hold of the wrong end of the lever, while its proper use may overcome any resistance. It is this bad application of

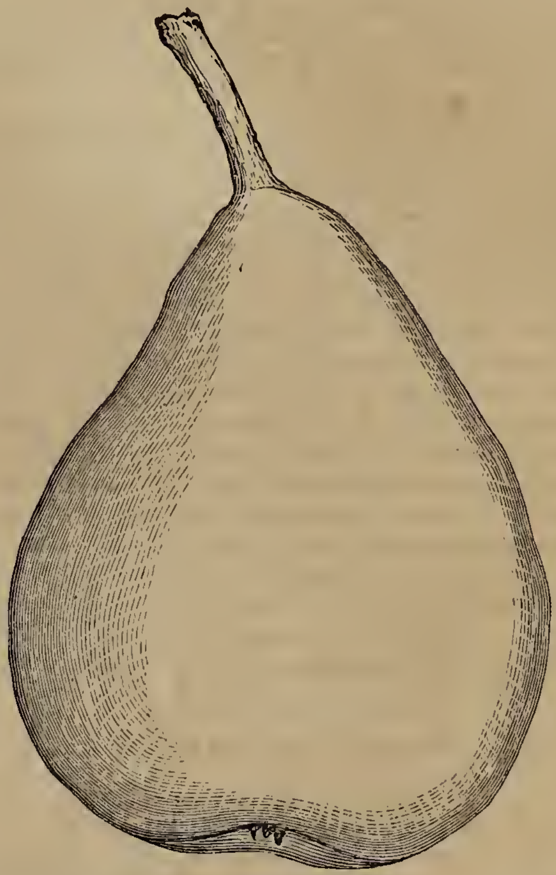
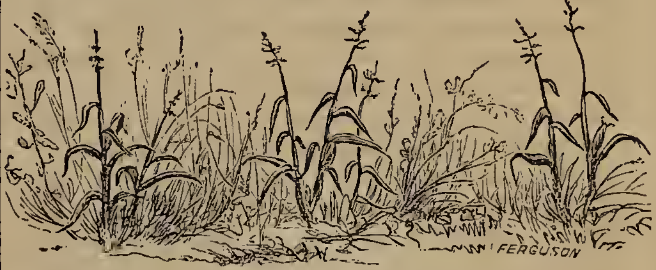
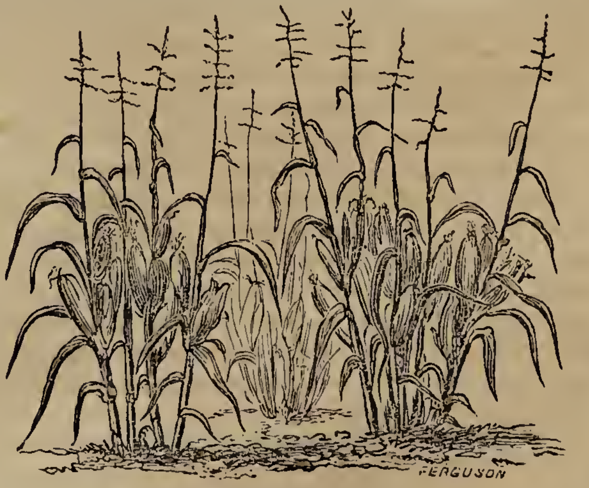


Fig. 2.



THE SQUIRE "UNLUCKY" WITH HIS CORN CROP.



THE FARMER'S CORN.

labor that causes heavy loss to hard-working, badly-managing farmers. It is the object of these remarks to point out the causes of failure, and the requisites for success.

ORDER.—The good performance of a single operation, does not constitute a successful farmer. If he raises a hundred bushels of corn per acre, while his other crops do not pay cost; or if he sells a young colt for two hundred dollars, and sinks five hundred on other animals, he is a poor manager. The perfection of the art requires a skillful attention to *every part*—a proper arrangement of *the whole*. Every thing must be done not only in the best manner, and at the proper time, but with the most effective and economical expenditure of money. All must move on with clock-work regularity, without hurry or confusion, even at the most busy seasons of the year. A comprehensive plan of the whole business must be devised. In maturing such a plan, several important branches of the subject are to be carefully examined, under the various heads of Capital, Laying Out the Farm, Buildings, Choice of Implements, Selection of Animals, Rotation of Crops, and arrangement of Operations in the Order of Time.

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Feeding Out Corn-Stalks.

Some weeks since (Co. Gent. Sept. 30,) you gave some of our "notions" on "Curing Corn Fodder"—perhaps it may interest new beginners in farming to read some items of experience in feeding them out. It is a subject to which we have given considerable attention, our part of "the chores" at the barn being usually among the cows and sheep, rather than with the horses or hogs, and the supply of corn fodder being generally an ample one. Indeed, like many other farmers now-a-days, the stalks of our corn would, if properly cured and saved, and then fed out *without waste*, nearly winter our cattle.

But the feeding without waste—how shall it be done? Not in racks and mangers, at least, for from any of the half-dozen kinds we have tried, the stalks soon find their way out under the animal's feet. Not in stanchions or stalls, unless you wish to spend as much time in clearing away the refused stalks as in supplying them at first. Not around the yard, if there is any moisture about, for if once trodden where the juices of the manure wet them, cattle refuse them utterly. Where, then, do you ask—where, with the least trouble, the least waste, and to the greatest satisfaction of the consumers themselves? We will try to answer.

When do cattle seem to consume coarse fodder with the greatest relish? Usually in freezing cold weather. Then is the *time* to feed out corn-stalks. The yard is then the *place*—frozen hard, there is no moisture to soil the fodder—no rising odors to give stock a distaste to it. Scatter it around the yard, and they will eat all but the coarser stalks—all they will eat under any circumstances. In such weather we give them three times a day; in thawy weather give hay in racks, in any clean place where they will eat it, and with little waste.

If there is much manure in the yard, it will not freeze as early as dryer ground or more exposed situations. So we find it this year—a small lot back of the barn being frozen hard, while the sheltered yard is yet too soft for a feeding ground. We can use this lot without loss or trouble, save that of raking up the refused stalks occasionally and returning them to the yard—to neglect this would be a very wasteful practice; they are needed for manure, and will help litter the yard—they are not needed where they now lie—reason sufficient for their removal. We now feed out corn-stalks and pumpkins there, and allow the old sheep to run with the cows a part of the time—the lambs being now in their yard, and fed on good clover hay and bean straw.

A neighbor of ours, who raises four or five acres of corn to our one, (mind we do not say bushels of corn, for he hardly begins to do it,) some years since tried cutting corn-stalks before feeding. He thought that it was some saving—rather more were eaten than if left whole—but he found it a good deal of labor, and the practice was soon discontinued. We do not believe it will pay, as a general rule, to cut the usual winter fodder for animals; they may as well use their teeth as we spend time and elbow-grease or horse-power, that they may fill themselves more rapidly. It seems reasonable that well-chewed food will be more perfectly digested than that half masticated, though for fattening animals it might be economy to give them all the aid and appetiteizers consistent with health and economy.

Corn-stalks, we would say in conclusion, are always worth saving. Because one has a poor corn crop it is no reason they should allow half its value to be wasted; but we have been, time and again, so pained by the sight of such waste, that we cannot forbear to utter our protest against it; and the half-starved animals of such farmers would protest, too, if they could, against the shiftlessness of their owners. J. *Niagara Co*, *Dec.*, 1858.

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Subsoil Ditching Plow.

Numerous inquiries having been made in reference to the plow advertised in this journal, and used in the experiments lately reported, showing the saving of expense in ditching by its use, we are compelled to answer them once for all through our columns.

1. Some inquire as to its strength and durability. It is not heavy, weighing but little more than 100 lbs., but is so well braced, that in cutting some miles of drain with a strong team through stony ground, no accident or injury occurred, except wearing the point or shoe. By renewing the shoe, it would no doubt last much longer than a common plow, as there is scarcely any wear elsewhere.

2. It will answer well the purposes of a common subsoil plow.

3. It differs from the common subsoil plow, by its capability of descending and working at the bottom of a three-feet ditch, while the team and plowman walk on the surface.

4. We think the $10 plow would be more generally useful than the large or $15 subsoiler, which is in a difficult and we think less easily managed form.

5. We have had a number of plows, variously contrived, for effecting the same object, & find this the best

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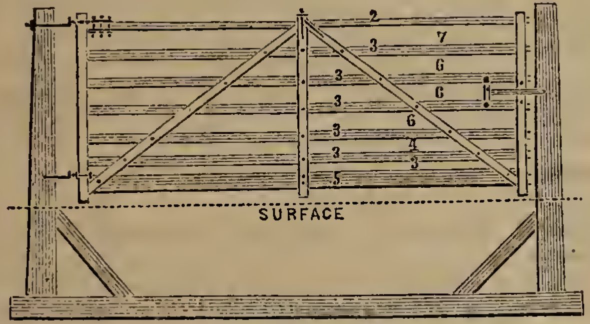
LEAKING COW'S TEATS.—A correspondent of the New-England Farmer says, dip the end of the teat in strong alum-water twice a day, for several days, and the leak will cease.

Farm Gates.

I made some farm gates last spring that I am much pleased with. I presume many people have made gates after the same or a similar pattern, but perhaps I have added some improvements that they had not thought of, and perhaps they have some improvements that I have not, but to my certain knowledge there are many gates made at as great an expense for material and labor, but without having as good a gate when finished ; in such instances I might suggest something of use A person wishing to make a gate, but having no model before him to work from, would get much assistance from a plan, as to height, length, size of stuff, width of spaces, &c., &c., even though it was not just the thing he wanted to use himself.



Above is my plan. The figures refer to the size of stuff and width of spaces; the slats are 1¼ in thick by 3 in. wide,—except the bottom one, which is 5 in wide —and 12 ft. long; the end posts 2½ by 3 in., and cut 5 ft. long, but as the gate is but 4½ ft high, it leaves 3 in. beyond the mortice, which is required to prevent the posts splitting out at the ends. The top rail is 2 by 2½ in. In most gates that I have seen, the top rail has been 3 by 3, and cut down from the middle of the gate to the front end to 2 by 3. The only place it is necessary to be 3 in. is for the mortice to receive the perpendicular.

The first gate I made was to fill a space 14 feet wide, and not having any 3 by 3 stick of that length, I took a common chestnut fence rail, 2 by 2½, and in place of morticing and pinning the perpendicular into it, made a shallow mortice sufficient to keep it in its place, and used a strap bolt, riveted to the perpendicular and passing through the top rail, with a nut on top, and also another strap or wing riveted to the front brace, the tendency of which is to draw away at this point and leave an open joint; this strap-bolt binds the whole firmly together at one of the points of greatest strain, and I was so well pleased with it, that I continued to use it in preference to a heavier top rail.

The upper hinge, you will notice, passes through the post of the gate in the same mortice with the top rail, and bolts on to it. By this arrangement, the whole strain of the top hinge is transferred directly to the top rail, drawing lengthwise upon it, and without straining any other part of the gate. The lower hinge should pass through the frame of the gate, with a nut and washer on each side, so that, if there is any sagging in gate or post, by altering these nuts the gate can be raised to swing clear again. The top hinge should also pass through the post the gate is hung to, with a nut on the back side for the same purpose. With this hanging, a gate will swing either way if desired.

In putting the gate together, I used 3 in. carriage bolts, ¼ in. iron, using a bolt at every crossing of brace and slat. The bolts can be got at hardware store, cost $1 75 a hundred—washers, 4 or 5 cents a hundred—and are much stronger and better in every respect than nails.

I have used the latch hung with a chain, and swinging horizontal, and also the latch hung at the end like a common door-latch ; of the two, I like the latter the best; either should pass through a mortice in the front post, with a bolt above and below it, to prevent splitting.

Next in reference to a post to hang the gate to. Here but few are sufficiently particular, and the consequence is, after a year or two the gate rests on the ground instead of swinging, and has to be carried round by main strength. The best arrangement I know of, is to dig a ditch the width of the gateway, 2½ or 3 ft deep, then lay an oak sill in this ditch, and mortice the posts into it with a stout brace from the sill to the post; fixed in this manner, the post cannot sag as long as the timber remains sound, and the gate once hung to swing clear will remain so.

This number of slats and width of spaces, is intended for a roadside gate, that will be required to stop pigs, sheep, geese, &c, but for a gate between lots, to turn horses and cattle only, a four feet gate with one less slat, and hung a little higher from the ground, answers every purpose. J. H. B. *North Nassau, N. Y*

"Sod" Crops on the Prairie.

Such weeds as are indigenous to the soil, are often the only crops raised by the farmer on their summer's "breaking" upon the prairie. Others "cut in corn '—cutting through the sod by a blow from an axe, and depositing the seed—which receives no other care until harvest A few have sown buckwheat and other crops, which practices we fully commend and hope to see more extensively adopted.

Buckwheat sown liberally upon the inverted sod hastens its decomposition, and to a considerable extent, prevents the growth of those weeds which would otherwise occupy the ground. Keeping down weeds is sufficient to repay the sowing of this grain, though its product were never harvested save by stock, but we have seen its yield quite as remunerative as though sown on older ground. It may be sown on the sod either before or after its inversion—and even in the latter case, will grow without harrowing, though a light operation of the kind is to be preferred.

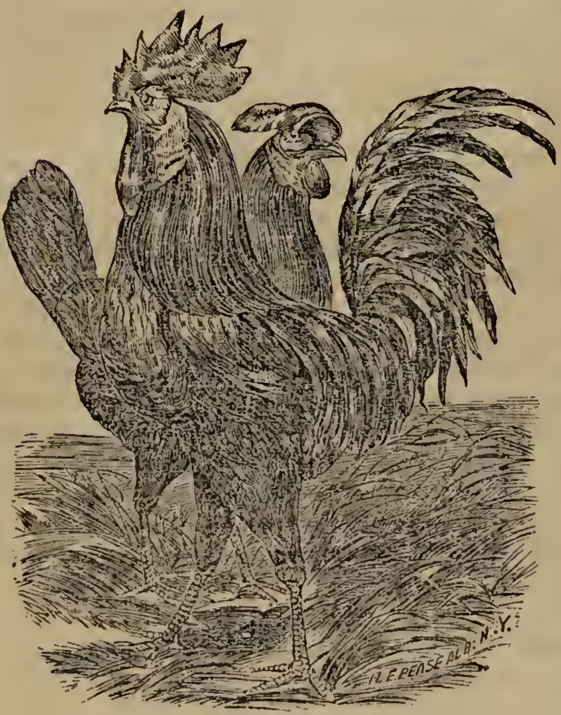
Beans are also a profitable crop on the "sod,"—cut in with an axe or spade, they need no farther cultivation until harvest, and usually yield a liberal return.

Millet is sometimes grown very successfully on the new breaking, and also the Chinese sugar-cane, and the Sunflower.

Large crops of turnips can be grown in favorable seasons at a very slight expense—merely the seed and labor of harvesting, or stock may be turned on before they freeze, to consume them. The better way, however, is to pit them for spring feeding to sheep and milch cows.

Besides the above named, all kinds of vines flourish and frequently give crops which repay the cost of tillage and breaking.

In view of these facts, furnished by a reliable Western farmer friend, we must call it poor economy to let a season be lost by allowing the "breaking" to remain in fallow.


H.E.PEASE ALB: N.Y.

Prize Black Spanish Fowls.

The above cut is a good representation of the fowls which received the first premium at the Fair of the N. Y. State Ag. Society. They were exhibited by W. R. Hills of this city.

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Sending Poultry to Market, &c.

West Washington Market, No. 227, New-York, Dec. 6.

L. TUCKER & SON—The readers of the COUNTRY GENTLEMAN probably have noticed in your market reports, that Bucks county poultry brings 13 to 15 cents per pound, when this State poultry sells from 7 to 10 cents per pound, and the difference becomes greater as prices advance.

To explain why this is so is my object, thinking thereby to repay in part for some of the many valuable hints I have derived from reading your paper.

The Bucks county stock are of the Dorking five-toed variety, sufficiently crossed with the large yellow variety to have fine yellow legs and feet—not feathered legs—all young and *well fatted*, and nicely dressed—legs and wings tied snugly to the body with wrapping twine, and then tied in pairs, and packed snugly in boxes, backs up.

It is my opinion that if all the poultry that comes to New-York from sections where your paper is read, was fatted and put up as above, with a little attention to breeding, the advance in price realised by the farmers would be sufficient to furnish every family with at least one good agricultural paper. D. L. HALSEY.

P. S *Lady Apples* sell to-day at $15 per barrel, at wholesale—retail at $1 per half peck. How many farmers have got one tree, or know what they are worth? *Garlick* brings $5 50 per hundred bunches the year round. How many farmers know how to put them up? D. L. H.

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☞ Dr. E. HOLMES, Editor of the Maine Farmer, has been elected President of the Maine Pomological and Horticultural Society, and D. A. Fairbanks, Augusta, Secretary, and Russell Eaton, Publisher of the Farmer, Augusta, Treasurer and Librarian.

Tuscany Cattle.

The *Boston Cultivator* gives a letter from David Torrey, Esq., of South Scituate, relative to some cattle imported from Italy, and exhibited by him at the Plymouth Co. Fair last autumn. Mr. T.'s son, who is travelling in Europe, sent them, and says that he finds the finest cattle in Italy of any country he has visited, and these are a sample of the fine stock of Tuscany. The bull was procured by special favor from the Grand Duke's herd—its dam is a good milker, giving 24 quarts per day. The heifer sent is of the same breed—her mother gives about 22 quarts of milk per day. Their disposition is very gentle—they are usually led about there by little girls, by a simple halter on the nose, as one leads a horse. He saw the grandfather of the bull at the fair; its live weight was 3 354 lbs.; and the oxen of the country look more like elephants than like cattle. The cattle have been here since August, and do not appear at all affected by the change of climate.

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Premium Crop of Potatoes—Dan's Seedling.

EDS. CO. GENT.—Mr. Cleveland's statement of potatoes in your paper having attracted particularly my attention, I propose to give you my statement of a half acre of "Dan's Seedling," which received the first premium at our Franklin County Show.

The land was sandy loam—a side-hill pasture for forty years. The last week in April it was plowed 8 inches deep and dragged. May 15, less than two bushels of potatoes were cut, leaving one or two eyes on each piece, rolled in plaster, and dropped in the hills on a handful of ashes and plaster; no other manure being used on the land, on account of the young trees on the ground. The potatoes were planted 3 ft. by 3 ft. 6 in.—a full third farther than necessary—two or three eyes were dropped in each hill, and at hoeing only one, or occasionally two stalks were allowed in a hill. They were twice hoed, and harvested Oct. 26. The yield by measure was just 100 bushels of 60 lbs. each, and of these there were not two bushels of small potatoes.

Expenses: plowing and dragging, $3.00—hoeing, $3 00—harvesting, $2 00—7 pecks seed, $1 35—plaster and ashes, $1.37. Total expenses, $13 72. Product, 100 bushels potatoes at 60 cts., $60 00—net profit $46.-28, from a half acre. I call the potatoes at 60 cents, the price of Carters here, though they will be soon sold for seed at $1 00 for every bushel.

The "Dan's Seedling" originated in the eastern part of this State about five years ago, and is now the most popular potato in the State; and considering its great yield, (100 bushels from seven pecks!) its uniform size, entire freedom from rot, and its dry mealy character when cooked, is at present the best potato in the United States. I have the Prince Alberts and a dozen other varieties, but none fills *every* requirement but this.

I think one reason of my potatoes growing so unusually fine, was in consequence of light seeding and thinning out to one stalk, and for that idea I desire to make my acknowledgments to GERALD HOWATT, who I think has contributed some of the most sensible and useful articles in your paper. I intend to send you some of my potatoes if I can without their freezing. JAMES S. GRENNELL, *Sec'y and Treas. Franklin Co. Ag. So. Greenfield, Mass.*

Constant Improvement.

Every farmer should be constantly "*fixing up*" his barns, stables, and yard fences—constantly adding to the comforts and conveniences of his domestic animals and their attendant—constantly improving in neatness, cleanliness, and efficient shelter. Racks for fodder, and troughs for meal, are easily made at this time of the year, and frequently save their cost several times over, by keeping hay from mud and meal for waste. Every field should have a good gate to enter it, and these gates may be constructed in winter by every ingenious farmer who has a workshop and a few simple tools.

Raising Potatoes Under Straw.

Messrs. Editors—In the May no. (151st page) of your excellent "Cultivator," I requested your subscribers to try the experiment of raising potatoes under straw, promising that I would do so and give the result. On the 8th June I put about half a bushel of very small potatoes in a corner of the field, on the sod, and covered them with about 8 or 9 inches of straw. A few days after we had rain, and the potatoes grew astonishingly, so that this fall I collected about a bushel of large and sound potatoes. I was obliged to take them up early, on the 5th Sept, as the field was cleared of grain and stock turned into it. Four persons of this county have tried the same experiment, and succeeded beyond their most sanguine expectations. This is certainly a cheap way of raising potatoes, and pieces of land, which, from stones or stumps, would be lost, are thus turned to profit. N. *St. M.*, *Canada East.*

Grasses in North Carolina—Danthonia Glumosa.

The Danthonia glumosa grows in dense luxuriance, with long radical leaves, forming a thick pasture resembling that of the Kentucky Blue Grass, (Poa pratensis,) on many of the higher mountains of North Carolina. I was told that it is an excellent winter grass, and much relished by both cattle and horses. It was common on Plott's Peak and Jones' Peak, two high mountains about six miles south-west of Waynesville, in Haywood Co., N. C. I do not know that it has ever been introduced into cultivation. It is certainly worthy of trial in its native region, where the cultivation of grass is too much neglected. That clover and timothy will flourish, has been fully tested in various parts of the state.

Dr. Coffin, at Jamestown, in Guilford county, is doing much to improve the agriculture of that section. He is a lover of grass, and he finds its cultivation profitable in the increasing fertility of his soil, and the less expense of keeping his stock. He has cultivated successfully both the red and white clover, and also timothy and herds grass. Col. Cathey, at the Forks of Pigeon, in Haywood County, N. C., a few years ago, had six tons 331 pounds of dry hay, from two cuttings on one acre, in one season. This shows what can be done. The mountains of North Carolina might become a great dairy region, and at least help supply the southern market with cheese and butter. To do this, more grass must be cultivated and new and improved breeds of cattle introduced. S. B. Buckley.
New York, Dec 4, 1858

Shelter for Houses and Barns.

Houses and barns, which stand in bleak situations, are often so severely swept by wintry winds that much fuel is consumed to keep the houses warm, and much fodder to keep up the animal warmth of stock. Trees and belts of evergreens prove therefore great promoters of both economy and comfort. In many instances, they may be secured during the winter. If the snow has covered the ground before it was much frozen, they may be easily taken up with broad cakes or circles of earth and placed on sleds for conveyance. They will always live if plenty of earth is thus carried with the roots. It is worth while to go many miles to secure evergreens.

Shelter for Sheep.

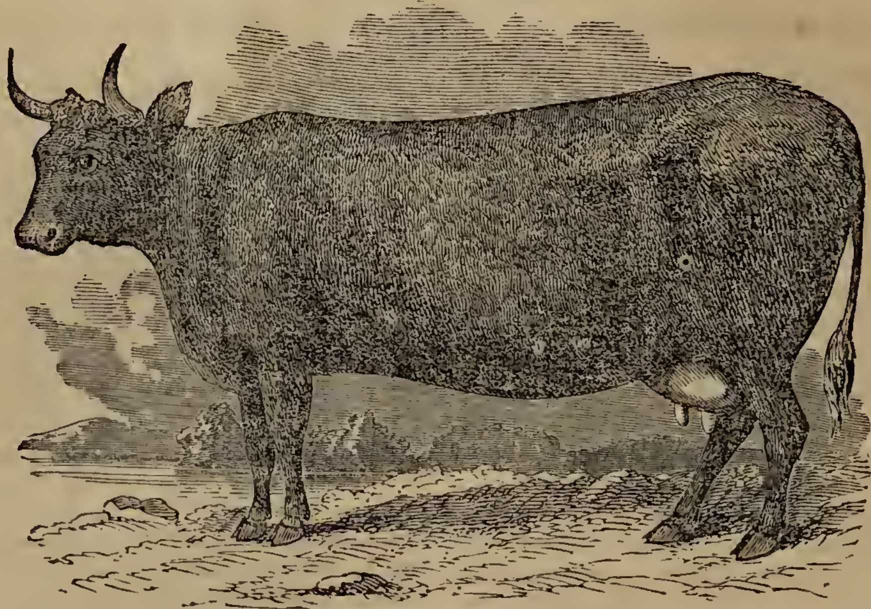
An intelligent farmer who provided good shelter for all his sheep, both from wind, and from overhead storms, assured us that he lost less during winter and spring, than through the rest of the year. Those who make provision of this kind, and who adopt the rule to do their own picking when they sell sheep as well as when they buy, need not have any poor or feeble animals.

Buckwheat on New Prairie Breaking.

Eds Co. Gent.—Your commendation of buckwheat as a "sod crop" on the prairie, I think a merited one I finished my breaking this year, too late for corn or other sod crop, and concluded to sow it with buckwheat, and have harvested and threshed it, and received a return of from five to fifteen bushels per acre. Where I got but five bushels, it was sown July 18th, and did not come up until the middle of August. The other was sown ten days earlier, and was favored with an immediate shower. I am inclined to think buckwheat fully as profitable a first crop as corn or other usual product. W. H. G. *Lee Co.*, *Ill.*

Draining—Large Barley Crop.

Eds. Co. Gent.—Go on, gentlemen, with your good advocacy of thorough draining. To help you, let me tell of a barley crop this season. The farmer who works my place (in Orrington, Maine,) certifies to me that from a field of five and three-quarter acres, drained land, he has harvested 260 bushels good sound barley, "round measure." He had measured one acre in the best corner of the field, from which the grain was housed and threshed separately, yielding fifty one bushels. This is not much behind "a good crop," under English high farming, and, I think, if the sowing had been with a drilling machine instead of a broad cast, Maine would not have been a whit behind England on this crop of about six acres. Except the good draining, there had been no more than ordinary good cultivation upon what was three years ago a piece of exhausted mowing land, cold, wet, and never fit for spring plowing. The "catch" of grass and clover, with the barley, is very good, and even promising in the future a good cut of hay. I have now more than five miles of drains laid, three and a-half to four feet deep, and hope to lay as many more, being well satisfied that I cannot afford to cultivate my soil undrained. N. N. E.



THE OAKES COW

The "Oakes Cow" and her Portrait.

In a recent notice of the excellent work on "Milch Cows and Dairy Farming," by **Charles L. Flint** of the Massachusetts State Board of Agriculture, it may be remembered that we criticised the portrait of the "Oakes Cow" which it contains, as being rather out of proportion. Mr. F. has kindly sent us Number 3, vol. iv of the *Mass. Ag. Repository and Journal*, published at Boston under date of January, 1817, by the Trustees of the Mass. Society for Promoting Agriculture. This Journal contains the large plate of the Oakes Cow, from which the portrait published by Mr. F. is an accurate copy on a smaller scale. The latter we are pleased to be able to present herewith by his permission. It will be seen that there was some ground for our strictures as to ill-proportion, but that these are entirely due to the artist who made the original drawing, and by no means detract from the merit of Mr. Flint's enterprise in having a copy of it taken for the benefit of his readers.

The fact of the case probably is that the cow did exhibit a remarkable development of that part of the frame shown above as so extraordinarily large, and that the artist, unused to animal "portraiture" in attempting to catch this, to his eye perhaps the only prominent feature in the whole animal, made something of a caricature rather than a likeness.

In the account that accompanies her portrait as originally published, no dimensions are given, so that of course we have only the probabilities of the case to judge from in speaking of the accuracy of the likeness. It may be difficult to believe that there should have really been in this instance, a length of body which we estimate as nearly one-fourth greater in proportion than that usually allotted to the bovine race, but we certainly cannot *affirm* the contrary.

Since we are making the portrait of this beast the subject of such extended remarks, it will be rather unfair to pass by those remarkable achievements in the milk and butter line, that have handed down the name of her owner as a stumbling-block in the way of imported cattle and a strong-hold of defence to admirers of "natives" in this and probably in all future generations.

The "Oakes Cow," then, as she has come to be called in these latter days, was simply a "dark-red, rather undersized" cow, "purchased out of a drove," which chanced to get into the hands of one Mr. **Caleb Oakes**, residing, we believe, at or near Salem, Mass., in the month of April, 1813. She proved a great producer, and was awarded the first prize at a State Fair held in 1816. The following record of her performances is copied from the work referred to at the beginning of this article:

Mr. Oakes made from her the first year, without any extra feeding, 180 pounds of butter. In 1814 he gave her about 10 or 12 bushels of meal, and made 300 pounds of butter. In 1815 he allowed her 30 or 35 bushels of meal, and the quantity of butter made was over 400 pounds.

Last spring I called on Mr. Oakes and requested him to keep a particular account this year of the product in milk and butter, which he has been so obliging as to furnish me. She calved the fifth of April, the calf was killed the 8th of May; being remarkably fine and fat veal. Through the season she has had good pasturage, and has been allowed one bushel of meal per week, and *all her skim milk*. Some time in June or July, Mr. Oakes weighed the milk, at which time she gave at night, 10 quarts, weight 26½ pounds; 7 do. in the morning, weight 18 pounds—making 44½ pounds of milk per day.

Statement of Butter made this Season.

Before the calf was killed, 17 lbs.	July 17—16	Oct. 2, 16¾ lbs.
May 15—14½ lbs.	24—16	15—15
22—16	31—16	21—16
28—17½	Aug. 7—15	29—16
June 5—19	14—15	Nov'r 7—16
12—18½	21—16	18—18
19—17	28—15	23—10
26—18	Sept. 4—15	30—13
July 3—18	11—16	Dec. 10—14
10—17	18—12	20—10
	25—15	
Total,		484¼

Since Mr Oakes has had the cow she has suckled four calves over four weeks each, and furnished about one quart of milk per day, for the use of the family. I purchased of Mr. Oakes some of this year's butter. I think I never saw finer.

E HERSY DERBY,

Note.—December 28th, 1816, eight quarts of milk per day.

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Illustrated Annual Register of Rural Affairs for 1859 By J. J. Thomas. Albany: Luther Tucker & Son.

This is the fifth number of this work, and is not inferior in interest to any of the series. It comprises for the space a great amount of information on a variety of subjects, especially on fruits and their cultivation.—*Boston Cultivator.*

Draining with Boards.

LUTHER TUCKER & SON—In the Country Gent. of Nov. 25, p. 337, I notice the enquiries of A. L. Wood of Scioto Co, Ohio. Permit me to give a few hints from my knowledge, in addition to your remarks in your answer to the aforesaid enquiries.

Some ten years since a drain was put down, which now is as good and works as well as when first made The ditch was dug two feet deep, with the requisite fall to drain off the water. I then took two hemlock boards, six inches wide and plump inch thick; I cut one board, to commence, in two in the middle, so that both boards should not butt at the same place, taking care to have both edges that were nailed, straight—showing the end thus, Λ. The ditch was cut the same as for tile, with the same slope as is usual. Where the bottom was soft, or quicksand, I put down a board at the bottom for the drain to stand on. Before filling, I put in fine hemlock boughs or straw. You will readily see that the earth will hold it together strong, so that with a slight nailing, it is perfectly safe from caving in. This plan has answered all the purposes of tile for ten years, and bids fair to last for years to come. In case of freezing, it has not been injured in the least.

If hemlock boards cannot be had, oak, ash, or basswood, will last well under ground for this purpose. There is much of this kind of drain put down in the north part of Oneida county, which shows that there is much confidence in the plan to save expense. GEO. TROWBRIDGE. *Camden, Oneida Co, N. Y.*

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A Cheap and Valuable Clod-Crusher.

MESSRS L TUCKER & SON—In the September number of THE CULTIVATOR is a communication from W. D. MCCULLOCK of Loudon county, Va., recommending and describing a clod-crusher of very cheap and easy construction, for pulverizing the soil and levelling the land. The past season having been very dry in this section, and farmers having great difficulty in preparing fallow ground for wheat, I determined to try one of Mr. McCullock's crushers in reducing the clods previous to sowing, (many of which were very large,) and found, to my great satisfaction, that it performed the work quite beyond my expectation. It is true that where the clods are large and *very* dry, it will require the harrow and crusher to be passed over a second time; but if the ground is at all in a moist condition, once going over, first with the harrow and following with the crusher, will be sufficient. I agree with Mr. McC that for levelling a piece of land for meadow, and for giving it a smooth surface, I have never seen an implement superior to it—and *for the cost of it*, I consider it the most useful and valuable farm implement that has ever come under my observation. After the materials were provided, my workman was not more than three or four hours in completing it. Deeming Mr. McCullock to have rendered an important service to the farming community by his communication, I as one, take this method of presenting to him my sincere thanks, and expressing the hope that he will favor us through the columns of your paper, with a few more of the same sort. S. F. P. *Caldwell Co, N C.*

A description of the clod crusher alluded to above, may be found on p. 107 of the current vol. of the Co. Gent. Every farmer should have one.

Breeding Turkeys.

MESSRS. LUTHER TUCKER & SON—The selection of Turkeys for breeding, with a view of improving the breed, is a subject on which there has been but little said, and until within a few years few persons were aware that they were susceptible of that improvement which the efforts of a few enterprising breeders have already shown. It is but a few years since farmers in this vicinity have been heard to boast that their fine flock of fat turkeys at New-Year's averaged ten pounds each, dressed weight. How is it now? Unless their turkeys, at the same age, average at least 14 or 15 lbs. each, we hear no "boastings." (By average, I mean pairs, male and female)

The next question is, how has all this change been effected? I would answer, by simply selecting and breeding from the largest and best, instead of killing these and reserving those for breeders that were small and unthrifty, or late, and perhaps unfit to slaughter.

The rule that like begets like, applies to the Turkey with the same force it does to any breed of domestic animals. The same form and color may be obtained, by a selection and continuous crossing of such as are desired, adhering to the same forms and colors for a number of generations, when in time the breed will become so established as to be nearly similar in all respects. The more compact we can get a Turkey the sooner it will mature, the easier it will fatten, and consequently the more profitable it is to those that breed for the market. The object then is get those of the largest size possible, with short legs, and broad compact bodies. At least this is the form I would choose.

As deformed ones are liable to throw out those similar, examine them and see they have no deformities, such as crooked breast bones, or hunched backs. Select those of the largest and coarsest bone of this form. See also that they are both wide and deep in proportion to their size. Discard all that have a green unfinished coarse look, especially if a female, for those of this stamp are apt to lay soft-shelled eggs, and seldom make good mothers to set, or rear young ones. Select the earliest hatched and finest from your flock each year for your own use for breeding, and continue this for a series of years, and I assure any one who adopts this mode of breeding, that they will ere long find their acount in it.

The improved domestic Turkey as we have them here, are all the different varieties of color but white. I have seen fine ones of a light silver gray; others, yellow or buff; also those between a bronze grey and yellow, or nearly the color of the spangled Hamburg fowls. But the most common colors are jet black, and dark bronze grey; the plumage of the males of the latter color, is glossy, much like that of the wild turkey, but of a darker hue. They have, or those of the latter color have, a slight resemblance to the wild ones in color, but none in form, being broader and more compact, and shorter in the legs, and instead of being wild and shy like the wild ones, they are naturally the most gentle of the turkey tribe; consequently there is no difficulty, let them lay where they choose, in removing them when they wish to set, to any place you may desire. They are as hardy as any Turkeys, and their natural docility makes them much easier to manage when rearing their young, than any breed of Turkeys I ever saw. E. ALLIN. *Pomfret, Ct., Dec 4.*

Inquiries and Answers.

"Improvement in Wagons."—By referring to your file of the Cultivator for 1847, p. 43, you will notice a description of an improvement in the running gear of carriages, and which refers to the use of the same arrangement in England. Can you give me any information as to where I can learn anything as to its use in England, in what periodicals or publications it can be found? S. D Law. [We are unable to give the desired information. Our correspondent will observe that the figure on p 43 of the Cultivator for 1847, was intended merely to show the *principle*—he will find more minute directions for the construction and practical use of this kind of wagon on p. 164 of the same volume of the Cultivator.]

Ice-House and Dairy Combined.—Will you or some of your subscribers be kind enough to inform me through your valuable paper the best and cheapest mode of building an ice house with a dairy attached? My situation is hillside, well shaded and easily drained. J. William Danner. *Warren Co, Va* [We would recommend the use of Schooley's Patent Preservatory, which has a room attached to the ice-house, and connected with it by ventilators in such a manner that the temperature of the connected apartments is completely controlled, and may be reduced nearly to freezing, or kept at any desired point between this and the temperature without. The required information, terms, &c, are given by J. L. Alberger, agent, Buffalo, N. Y]

Granary — Dadd's Horse Doctor.—I shall be obliged if you will let me know in your next number, the dimensions, and in your estimation the best plan fo a timber-built granary capable of holding a thousand bushels of wheat. And also if you have any book in your establishment giving the description of and the remedy for the diseases of horses, and the price of such book. R. W. *Farmer's Branch, Dallas Co., Texas.* [The space required for 1000 bushels is about 1250 cubic feet—or a space ten feet wide, ten high, and twelve and a-half feet long. A more convenient form would be five feet wide, five high, and fifty feet long,—extending around an apartment on three sides, say 21 feet long and 18 feet wide, leaving a central area 16 feet long and 8 feet wide. *Dadd's Horse Doctor* is the best work on the diseases of the horse—price one dollar, sent by mail]

Raising Peaches from the Stones.—The number of your valuable paper containing an answer to my inquiries relative to the propagation of the peach, &c., has been received, (Co Gent. Oct. 28, p. 270) Allow me to return my sincere thanks for your kind and satisfactory answer. The varieties you recommend I shall endeavor to procure if possible. If you can inform me where I can procure the genuine seed I will be under renewed obligations. B. B. R. *St. Joseph, Mo* [The varieties named can be obtained only by budding those sorts into seedlings, and can be procured of any established nurseryman. Planting the stones will bring new varieties, some of them closely resembling the original, others more unlike, but commonly inferior Some varieties produce from the stones nearly the same, with very little variation—with others there is more deviation. The stones of select sorts cannot now be procured, but they might be saved another year by any cultivator of the finer sorts. Austin Pinney of Clarkson, Monroe county, N. Y., and Dr. E H. Sylvester, of Lyons, Wayne county, N. Y., both have extensive and select orchards, and would doubtless furnish a supply of the stones if applied to seasonably another year.]

The Hop Tree.—I want more information about the Hop tree than what I have. I am told that as an ornamental tree they are as nice as the nicest, and that the hops they produce are superior to the common hop. If we have a native tree that combines the ornamental with the useful amoung us, please give us what information you or some of your correspondents may possess about it—how propagated and its character as a grower. D B. Richards. [We have for many year cultivated the Hop tree (*Ptelea trifoliata*) as an ornamental tree, but have never used the seeds for hops, and cannot therefore speak of their value. The tree is handsome, but not pre eminently beautiful. It is easily raised from the seed and is a moderate grower.]

Grafting the Peach.—Can peach seedlings be grafted? I have a few thousand that I did not get budded this fall on account of the dry weather, and would like to graft them next spring, if it can be done with any kind of success. "What say you?" D. Shallenberger [The peach cannot be profitably grafted at the north. The operation sometimes succeeds, if a portion of the two-year wood is cut off with the scion and used, and the work performed very early in spring, with a sharp knife. At the south, grafting in the root is generally successful. We would recommend cutting down the stocks, training a single fresh shoot, and budding into it.]

Steam-Boilers—Lice on Swine and Poultry.—What steam or water boiler is the best for making hot water for cooking food for cattle? What will kill lice on hogs, (say two hundred in a pen fatting?) Lime sprinkled where poultry are kept will destroy lice, however numerous. A Subscriber. *St. Mathews, Ky.* [Our correspondent will probably find what he desires on p. 115 of the Illustrated Annual Register for 1858, in relation to steam-boilers, &c. We have had no experience with lice on swine—cleanliness is usually regarded as the best prevention,—clean pens and clean litter—and pulverized sulphur mixed with their food, say a teaspoonful a day to each animal, would probably be useful]

The Contents of a Corn Crib —In looking through "Pedder's Land Measurer," the other evening, I saw a rule and example for measuring corn in the crib, viz.—That a crib 12 feet long, 11 broad and 6 deep, would hold 330 bushels of shelled corn. The farmers in this vicinity have always used the following rule: Multiply the length, breadth and depth together, and divide by 3, which will, when applied to the above crib, give 264 bushels, showing a difference of 66 bushels in favor of the former. You will confer a favor by giving us your opinion as to which one of the above rules you consider the most accurate. J. B. T. *Chaddsford, Del. Co., Pa* [We have made a hasty calculation, the result of which is between the two rules given above. Any estimate of this kind can only be an approximation to the truth—at best an *estimate*. The U S. standard bushel contains 2,150 cubic inches; by multiplying the length, breadth and depth of the bin above mentioned, its contents will be found to be 1,368,576 cubic inches, which, divided by 2,150, yields a quotient of nearly 637 bushels, and this halved (in order to reduce the corn in the ear to shelled corn,) gives as the actual contents of the crib in question, 318 bushels.]

DIGGING CARROTS AND POTATOES.—Will you inform me in regard to the comparative success of Allen's Potato Digging Plow, and the more complicated digger illustrated some time since, manufactured by J. E. Hardenburgh? Will some old carrot raiser inform me of the best method of digging them? Was it not for the labor of digging them, we should feed more carrots and less corn to horses. J. B. JONES. *Clinton Co*, *Iowa*. [We have not been able to give a full trial side by side, to both of these machines—Allen's we have thoroughly tested; of Hardenburgh's we have merely had an opportunity of examining its construction, but have not witnessed its operation. Both will work with equal rapidity, or throw out one row of potatoes as fast as the horses drawing it will travel Allen's has greatly the advantage in simplicity and cheapness; while Hardenburgh's is probably more perfect in its operation, as it must unquestionably leave every potato on the surface of the ground, while a very few will escape Allen's. We can, however, strongly recommend the latter from the trial we have made, as a very valuable labor-saving machine, abridging the cost of digging at least three-fourths in ordinary cases, or in other words two men will harvest an acre with its aid, while they would be digging and picking a fourth of an acre in the common way. A furrow with the common plow close to one side of a row of carrots, followed by a sub-soil plow to run deeply under them, is the best mode of harvesting we know of, thus assisting their easy removal by hand. If any of our readers know a better way, will they please inform us?]

AGRICULTURAL BOOK-KEEPING.—A new subscriber says:—"Being a young farmer about to start in business, I have frequently, during my apprenticeship, sought for a set of books found by a practical "Co. GENT." to be suitable for farm accounts, but thus far in vain. Will not you be so kind as to give me a sketch of such books? I think the information would be gladly received by many. N. M. E." ["Cochran's Farm Accounts," which we send by mail post-paid for $2.30, contains the only system which we can now recommend as accessible to our correspondent. The set sold at above price, comprises an instruction book, not difficult to comprehend, and ruled blanks for day-book, &c., and ledger.]

LEAKAGE OF MILK.—I have a very valuable Durham heifer which has a small hole in the side of one of her teats. It makes it very inconvenient when milking Can you give me a remedy for it. R. W. [We have sometimes been annoyed in the same way, but have found no effectual remedy. Collodion and other external applications soon work off, so far as we we know. If some of our readers know a remedy, will they please give it]

ARTIFICIAL INCUBATION.—Will you, or any of your contributors, be so obliging as to inform me, through the columns of the Co. GENT., whether chickens are hatched by artificial incubation to any considerable extent at the present time? and also explain the most approved method? ROSWELL HAWLEY. [Several "egg-hatching machines" have been invented both in this country and in Europe, but whether any of them have proved really useful in practice we are unable to say. Our correspondent will find a full history of artificial incubation in the last edition of Bement's "American Poulterer's Companion," to which we must refer him, as we have not room for the explanation he asks for.]

JAVA SPRING WHEAT.—C. E. K. inquires for new spring wheat. Here, for the last two years, we have cultivated the Java Wheat in preference to Black Sea and other kinds. It is bearded, and on our poor Cape Cod soil, gives from 20 to 25 bushels per acre upon an average. What it would do on rich prairie I cannot say. Having been cultivated but a short time, it is rather scarce yet, and of course bears a good price. I send you a few grains. HENRY F. GIFFORD. *Falmouth*, *Mass.*

CROOKED HORNS.—I have a pair of steer calves, which took the first premium—perhaps the best in the State—at six months old, weighed 1,160 lbs., just alike —perfect in build, dark red without a white hair—grade Durham. The horns of one of them, from his crowding against the manger where he was tied, have an inclination out almost straight towards the sides of the head. Now I believe there is a way of scraping them a little when young, to give them a right direction. Is it to scrape on the side opposite that towards which you wish to incline the horn, on the principle that when it is scraped it will grow faster and push the horn over? Or should it be on the side which you wish bent, that the horn being weakened there may be inclined that way? Will somebody who has tried it tell? J. S. GRENNELL. *Greenfield*, *Mass.*

WHEN IS THE BEST TIME TO SOW PEAS?—This is a matter of some importance at any time, and more especially so of late years, our barley crops having been so nearly destroyed by insects. We live upon a soil natural to the growth of winter wheat. We want to grow a spring crop suitable for sowing wheat after. Our practice has been to sow after barley. I know of no crop so well fitted to take its place as peas. The best time of sowing this crop therefore becomes a matter of no little importance. Some say sow early—others not until June. For myself, I have had but little experience, and would like information upon this important subject, and desire to draw out the experience of *practical* men, through the medium of the Country Gentleman. Farmers, give us your views. G. BUTTS. *Onon. Co.*, *N. Y.*

CRANBERRIES FROM THE SEED.—Will you or some of your numerous readers, please inform me how cranberries *can be raised from the seed.* I have tried several times by planting the berry, both spring and fall, and a total failure has attended every trial. I have a piece of ground which I think well adapted to the growth of the cranberry, if I can get them started. J. STAFFORD. *Cleveland*, *O.* [The easiest way to make cranberry plantations is by setting out blocks of soil or sods containing the full grown plants. Transplanting the denuded roots is more difficult. The young plants from seed are at first very small, and probably would not succeed unless in a carefully protected and cultivated seed-bed, until they attain good size.]

RHUBARB DYING.—Will you please give me the cause of the rhubarb dying in summer after having made a fine growth? Please give us a remedy. M. M. *Danville*, *Ill.* [Will some of our correspondents please answer?]

Notes for the Month.

To Advertisers—please mention Prices.—Permit me to ask you to suggest to your numerous advertisers of live stock, to name in their advertisements the price or range of price of their animals.. Several of my neighbors, as well as myself, wish to purchase, and yet buy at home or in Kentucky, because we ascertain at once the price. We frequently, no doubt, could buy to better advantage at a greater distance, but it is tedious and annoying to have to open a correspondence to find the price of a boar, or sheep, or a game fowl. A Subscriber. *Cincinnati, O.* [The frequency with which this suggestion is made, shows that many desire to obtain information about advertised stock and articles, without going to the trouble of a correspondence. We have now before us quite a long letter from another distant State devoted to the same subject.]

Joice's Star Mill.—A Subscriber at Nyack is "distinctly" informed that nothing in the form of an *Advertisement* is admitted into the Co Gent, except in the appropriate space reserved for this purpose. All "communications" may be distinguished from "Editorial" matter by the signatures of their writers. Applying these rules, which have ever been invariably adhered to in our columns, he will probably require no further intimation as to the character of a notice that we recently gave of the above mill. Because other papers do admit advertisements in "such a questionable shape," we have never thought it necessary to deny ourselves the privilege of expressing a favorable opinion of any implement or stock which we think may prove beneficial to our readers.

Sales of Devons.—We learn that C. S. Wainwright, Esq , of "The Meadows," Rhinebeck, has recently sold, from his valuable herd of Devons, the following animals: "*Hiawatha*," calved March 13th, 1856, winner of 1st prize in class of imported two year olds, at Syracuse, to Hon. E. R. Brown, Mount Hope, Miss.; "*Roanoke*," calved Dec. 3d, 1857, to Mr. Geo. F. Curwen, West Haverford, Penn ; "*Nebraska*," calved Feb. 19th, 1858, to Mr. Chas. P. Alston, Charleston, S C ; "*Utah*," calved May 12th, 1858, and "*Oregon*," calved June 5th, 1858, to Mr. J. S. Colegrove, San Matteo, California.

The Sylvester Apple.—We are indebted to Dr. E. W Sylvester of Lyons, N. Y., for a box of specimens of this new variety. It is a handsome and delicate fruit, ripening during the latter part of autumn; is nearly medium in size, roundish, regular, skin thin, yellowish white, often with a handsome, delicate red cheek, and somewhat netted with thin russet; the flesh is white,—nearly or quite as much so as that of the Fameuse,—crisp, fine grained, sub-acid, not high flavored, but very pleasant, delicate and agreeable Dr. Sylvester informs us that the original tree, on his place, has a beautiful upright head—and that the fruit will cook in five minutes, and forms a very white dish. The examination of a single season is insufficient to enable us to fix the place of this apple in the scale of merit, but it certainly deserves further attention on the part of fruit-growers.

Liquid Manure for Grass.—At the Massachusetts State Farm, liquid manure has been used to a considerable extent. Hon. M P. Wilder, chairman of the committee reporting on crops, says: "Wherever the liquid manure has fallen on grass land it has left its mark, producing hay and feed in abundance"

The Woodburn Short-Horns.—We are pleased to learn by a recent letter from R. Aitcheson Alexander, Esq, of Woodburn Farm, Woodford Co., Ky., that his extensive herd is all doing well Mr. A. mentions a young bull now coming on, which good judges have thought to be superior to "Albion"—a very promising animal already noticed more than once in our columns. The prospect at present is that there will be a somewhat smaller number of Short-Horns to offer at the next Woodburn sale, than was the case the past year, but the stock will be superior, it is hoped, to that presented on any previous occasion of the kind

Scarcity in France.—Root crops and fodder were a comparative failure on the continent. The *Mark Lane Express* says: "Never were the graziers of France in a more deplorable condition, every kind of winter food for cattle having to a great extent been consumed to keep the stock alive. A great number of lean stock of all kinds have been brought over to this country, the price, which is not more than half the real value, proving a great temptation to speculate in them."

Black Polled Cattle.—This breed made a great show at the recent Fair of the Highland Ag Society. For good "butchers' beasts" it is not easily excelled —at least in Aberdeenshire. One bull shown there, it seems, took a gold medal at the Paris Exhibition, on the ground of being of a hornless breed, and hence *harmless* to men or other animals—the award being made by an amiable official of the French Society for the Prevention of Cruelty to Animals! It is well known that the polled cattle are far from being of an especial peaceable disposition.

The Fires of Life.—When an inventor brings to notice some improvement which he has patented in the boiler arrangement or fire apparatus of an Engine, he is sure to claim that he can make a given amount of fuel go farther than any of his predecessors. He will point to the quantities of heat usually suffered to go to waste, and triumphantly endeavor to prove that he has made an unusually large proportion actively available. Now in the animated engines we see around us, whether two legged or quadrupedal, there is a similar waste of the fuel they consume in the form of food—the fires of life are kept up at an expenditure of a much greater mass in weight and bulk, than is added to the flesh of the consumer, even in times of growth and fatting. Dr. Playfair's calculations in stock feeding, were, that to produce one pound of flesh, there must be eaten

100 lbs turnips.
50 lbs. potatoes.
50 lbs carrots.
9 lbs. oatmeal,
7 1 lbs. barleymeal.
7.4 lbs. bread.
4 lbs. lean meat.
3½ lbs. peas.
3.3 lbs. beans,

in which it will be noticed that even when lean meat is itself used as food, the process of converting one pound into living flesh consumes *three pounds*—much as a donor of fifty guineas to one of the benevolent societies of England once remarked—that he had given one guinea for the benefit of the Hindoos and *forty-nine to get it to them.* Chemists tell us, however, that in the case under consideration the waste may be honestly accounted for, which is some comfort. It would be a profitable thing if we could obviate at least part of it. Without going into the philosophy of the fact, the season admonishes us to remind our readers that a much greater and more extravagant degree of waste than that above estimated, may be much reduced by the provision of COMFORTABLE SHELTER. If your stock are forced to lavish the heat of the inward life-furnace under the lee of some old fence, it is very certain that they cannot give out enough of it to render the season sensibly milder for you, and it may be regarded as equally sure that if protection is provided for them they will devote a much larger proportion of their food to flesh-saving and flesh-making, and a smaller part of it merely to maintaining the vital warmth. To recur once more to the illustration with which we began —in an engine every part used for the storage or transmission of heat, is thoroughly *packed* and surrounded by non-conductors, so as to retain the greatest possible portion for use—and so, if you are feeding your stock in order to keep up or better their condition, you will find it a profitable investment to put a roof over and tolerably close walls around them in cold weather.

The Right Spirit.—We make the following encouraging extract from a letter dated Davenport, Iowa, Nov. 29:—We have a meeting of our County Society next Saturday, and I hope to be there, and shall endeavor to get some subscribers to your valuable journals. I shall have some hope for the eventual success of Scott County farmers, if they will read and reflect a little. I consider the Co. Gent. one of the most accessible means for real practical agricultural knowledge, and if I can get ten men to take it, I shall rejoice over ten blessings brought into ten families. The weather is quite unusual—cold, damp, and frequently rainy. I consider the illustrations of Farmer Thrifty and Squire Slipshod capital, and the whole article extremely pungent and useful. W. A.

☞ "He never went to his orchard except to gather its fruit." This is the pithy form in which the Newark Daily Advertiser gives the source of the difficulty of which one of its readers complained bitterly the other day, viz: that when he went to his trees for apples, the apples were *not there*, but *he* could'nt tell why! How many there are who garden and farm on this system. They never go to the land, except to gather in its harvests. It quite surprises them that farming don't "pay" as well as it "used to." They never try the virtues of that arithmetical rule known as *addition* —confining all their agricultural figuring to its converse, *subtraction*. It wonderfully amazes them that a similar operation should have spontaneously started in the region of the pocket book. Fruit trees and grass lands, grain fields and stock, will all be likely to disappoint those owners who never expect to *give*, as well as *get*. Generosity to Nature, inanimate or alive, is a cardinal doctrine in the creed of all who would prosper under her benignant smiles.

Peas as a Field Crop.—Among the "noteworthy items" which we might (and shall) give from the last volume of our *State Ag. Transactions*, we condense the following: Amanda Newton of E. Bloomfield, Ont. Co., to whom was awarded 1st premium on peas, raised 38 bushels per acre, after wheat, and without manure. Variety Canada field peas; soil mellow Sowed 2½ bushels seed per acre the 15th of May, covered with the wheel cultivator. Harvested the 2d of Sept. with the horse-rake; drew and thrashed with horses the 4th of same month. Product 40½ bushels to the field, 1 1-20 acres. Expense of cultivation, $11.50

The Ohio State Board of Agriculture.—We have received (just as we are going to press,) an account of the Tenth Annual Meeting of the Ohio State Ag Society, at Columbus, Ohio, last week, and the election of the Board for the new year. We have only room at present to give the result of this election, which is as follows:

Lucien Buttles of Franklin.
John Reber of Fairfield.
J. M Trimble of Highland.
L. Q Rawson of Sandusky.
Dr. N. S. Townshend of Lorain.
Maj Jno. M Millikin, (re-elected) of Butler.
Alex. Waddle, (re-elected) of Clark.
W. DeWitt of Cuyahogo, (new member.)
D. G. Gardner of Lucas, " "
C. H. Potwin of Muskingum, " "

The Board subsequently organized by electing Norton G Townshend of Lorain, President; Lucien Buttles of Franklin, Treasurer; D. E. Gardner of Lucas, lin, Corresponding Secretary.

Queens Co. Ag. Society.—We are indebted to the Secretary, John Harold, Esq., for the proceedings of this Society at its annual meeting on the 6th of Dec. The following officers were elected:

President—Hon. D. R. F. Jones.
Vice-President—G. L. Willard.
Secretary and Treasurer—John Harold.
Directors—Robert Willetts and Joseph Tompkins.

The Society appears to be in a prosperous condition —the total receipts, including balance on hand, were $2.659.15—payments $1,745.41—leaving a balance of $913.74.

Large Calf.—I notice you sometimes give accounts of heavy calves. Mr. F. J. Swaby of Seneca Falls has a grade Durham calf, which at five months old weighed 602 lbs. He sucked half his mother's milk and no more—was fed some oil meal and ground oats besides. It appears to me it might be profitable to raise calves in that way for New-York market, as such calves would often bring fifty dollars each, and I don't know of any way that cows would pay better. John Johnston. [We wish our friend Judge Van Bergen of Coxsackie, would give us his experience in fattening calves for the New-York market. If we are not mistaken, he at one time disposed of the milk from a considerable herd of cows in this way.]

Weeding Chess from Wheat.—I have a *private* word to say to you, as I don't want to see the old chess question dug up again. When any of your correspondents who believe in the transmutation of wheat into chess, say anything to you on the subject, tell them that I can weed out all the chess in the fall, and leave every spear of the wheat; so if it does change it must change very soon. The plants look widely different as soon as they come up, and half the trouble that people take to try to catch it *turning*, would learn them to distinguish the two plants, and if worth their time, weed it out. C. W.

☞ E. Cornell of Ithaca, N. Y., has just sold the fine Devon bull "Valiant," who won the first prize as an aged bull at the New-York State Show in 1855, to Otis E. Wood, Etna, Tompkins Co., N. Y.

☞ J. H. Klippart, Esq., Secretary of the Ohio Board, will please accept our acknowledgments for copies of his last State Ag. Report, transmitted through the hands of Col. B. P. Johnson of this city.

List of Nurseries.—A few nurseries were omitted in the list published in the Register for 1859. A much larger number, found in other lists, of such as had ceased to exist, or were unworthy of notice, were also omitted. An anonymous writer in New Jersey, says there are two omitted in Burlington county, occupying some twenty acres each, but he does not inform us of their names and localities. This is like some other letters we have received, the writers of which seemed to think we could know more of every particular neighborhood throughout the entire Union, than the residents of those numerous districts. Some knowledge of the difficulty of collecting this kind of information may be obtained, when we state that the most noted nursery at Boston, and the second in size of the mammoth establishments at Rochester, failed to give us any information whatever, after repeated applications for it, and similar failures occurred all through the country. If the owners of nurseries do not respond to a widely published call, they must expect a few omissions of those of a more insignificant character.

Movement of Short-Horns and South-Downs.—Mr. Samuel Thorne of Dutchess Co., has recently sold, to Capt. Mayhew of Centerville, California, the very promising bull calf, "Master Buttercup," got by "Second Grand Duke," (12,961) out of "Buttercup 2d." Mr. Thorne has sold to our spirited breeders in Albany county, the fine South-Down yearling bucks Nos. 7 and 57, and several ewes, all from imported prize ewes, and sired by the imported prize ram No. 112. Mr. T. has also sent to Albany a fine Berkshire sow, from the stock of his own importation, which will make a good cross upon the stock already in this section, from the stock imported by Col. L. G. Morris. The accumulation of such fine animals in Albany will be of vast benefit to the farmers of this and the adjoining counties. The Duke of Gloster, Duchess 64, 2d Duchess of Thornedale, and the other animals mentioned in No. 16 of Co. Gent., as having been sold by Mr. Thorne, passed through Albany, on the 10th inst., on their way to Geneva.

The Fat Cattle Show of the Am. Institute—held at New-York last week, although not large, is said to be an improvement upon one which took place last year. It is stated that there were in all ten exhibitors of Fat Cattle, showing 30 head—including 16 Herefords from Jas. Van Alstyne of Columbia Co., several head of Short-Horns and "natives," a pair of three-quarter Short Horn steers from R. D. Cornell, Clinton, Dutchess Co., a half Short Horn ox from J. A. Hamilton, Lima, Livingston Co., "weight 2,731 lbs., bought by Simon of Brooklyn, for $200," &c. &c. The show of fat sheep was "large—that is there was one large fat sheep, exhibited by Wm. S. Holmes, Marathon, Cortland Co., a Leicestershire wether, said to weigh 330 lbs." A lot of 35 fat hogs, if we rightly understand the account before us, was exhibited by Mr. Hamilton of Livingston Co., averaging a weight of 430 lbs. each, and sold at 7 cents per lb. gross About 20 coops of poultry were also shown.

☞ We are indebted to our correspondent D. L. Halsey, from whom a communication will be found in another column, for two pairs of fowls prepared in the manner he there describes, and certainly presenting a most inviting appearance—certainly sufficiently so to account for a great difference between the prices required for poultry so dressed, and that sent to market in the ordinary way. Also, some weeks since, to the same source, for a pair of ducks, a cross of the black Cayuga with the Rouen. Mr. H. states that he finds on dressing ducks of this cross, "a gain of 1½ lbs. per head, giving me a balance in favor of taking the Country Gentleman and improvement of Rouen ducks, as follows:—

On hand 5 pairs,	$25.00
3 pairs sold,	15.00
8 do. half-bloods,	4.00
Gain in weight on 75 dressed, 112 lbs., at 13 cts.,	14.56
	$58.56
Deduct 1 pair Rowen ducks,	6.00
Balance,	$52.56

The feathers, and services rendered in catching grasshoppers, paid all expense in raising and fatting. D. L. Halsey.

Buggy Peas.—Mr. D. Bostwick, of Wyoming county, thinks there is danger in pouring hot water on peas to destroy the bug, of destroying the vitality of the peas. He says he keeps his seed over one season, and in that way escapes their ravages.

Good Hogs.—I finished my butchering about two week ago. I had one hog that weighed when dressed, 641 lbs.—a sow two years old last April, that had reared two litters of pigs, and two the same age, that had had three litters of pigs, weighing 448 lbs. and 465 lbs. John C. Decker.

Spring Wheat.—A Wisconsin correspondent writes us—"The Canada Club, for the last seven years the favorite and very successful spring wheat, has generally failed from one cause or another—the best crops being either 'Rio Grande,' a dark colored spring wheat, or the 'Fife,' a new variety just becoming generally known here."

Fife or "Flint" Wheat.—This variety of spring wheat, which before threshing, appeared to give great satisfaction, is *not* destined to have much patronage it seems. The reason is that its milling quality is "flinty," in correspondence with its genral and appropriate name. The millers consider it a quite inferior article, from the grittiness or flinty quality of its flour. This I have from millers themselves.

All things considered, the Club is still the favorite spring wheat, though the Rio Grande was the best in yield and quality this season. But as there were several fields of very good club in different parts of this and adjoining counties, it is thought that some peculiarity of the season or time of sowing, was the cause of its failure, and that it is not "run out" yet. It will therefore have a further and extensive trial. C. *Wisconsin.*

Profits of Farming.—Wm. D. Kelly, who received the first prize on Farms in Ohio, last year, in his report says: "My farm shows from $1,000 to $3,000 profit per year. The changes of the times change the profits. *I have never lost money by farming yet.*"

Improving Swine.—We dined with a farmer friend the other day, who has succeeded in producing as fine bred porkers as we ever saw. He says, procure the best of each sex to be had; their produce will be an improvement. Continue to do so—if smaller animals are desired, breed in-and-in.

To Get the Cost of Hay, &c., by the Ton.—Business men well understand that the cost of any commodity sold by the thousand—the price being known—is got by simply multiplying the amount by the price, and cutting off three figures for cents and mills. The cost by the ton is as easily come at, if we first take *half* the price and proceed as above. For example—What will 6475 lbs. of hay come to at $8 per ton? 6475x4 (half the price) =25,900=$25 90.

A Reader.—The volume which we advertise to send post-paid for $1, contains the *Annual Register* for the years 1855-56-57. It is printed on large and heavy paper, giving liberal margins, and as the calendar pages and advertisements are omitted, and the whole re-paged and re-indexed, we consider it the most comprehensive and attractive work that has ever appeared on agricultural and horticultural subjects at the price. We call it Rural Affairs, and we think among its 440 illustrations you may find some both interesting and instructive.

The Egg Trade of One County.—One merchant in Marion county, Ohio, has shipped this season 124,950 dozen of eggs in 1,785 barrels, costing, at 7c. a dozen, $8,746 50. So say the papers.

Where our Publications May be Had.

The following list includes some of the Agents of our Publications in principal cities and towns. The Illustrated Annual Register may be had, at wholesale or retail, from them—including all the back numbers:

NEW-YORK—A. O. Moore, 140 Fulton-st.
C. M. Saxton, 25 Park Row.
Fowler & Wells, 308 Broadway.
Wiley & Halsted, 351 Broadway.
TROY—Levi Willard.
SCHENECTADY—George Clare.
BUFFALO—T. S. Hawks.
ELMIRA, N. Y.—Wm Skelly.
ROCHESTER, N. Y.—D. M. Dewey.
UTICA, N. Y.—Webb & Walker.
BOSTON, Mass.—Joseph Breck & Son.
J. J. Dyer & Co.
Curtis & Cobb.
SPRINGFIELD, Mass.—H. & J. Brewer.
LOWELL, Mass.—A. Whitney.
PITTSFIELD, Mass.—Reid & Pierson.
KEENE, N. H—G. & G. H. Tilden.
HARTFORD, Ct.—J. O. Hurlburt and C. G. Geer.
MIDDLETOWN, Ct.—D. Barnes.
WEST MERIDEN, Ct.—Henry Willis, Florist.
PROVIDENCE, R. I.—A. H. Stillwell.
PHILADELPHIA—W. B. Zieber,
H. A. Dreer.
PITTSBURGH, Pa.—Hunt & Miner.
LANCASTER, Pa.—Springer & Westchaeffer.
BALTIMORE, Md.—J. S. Waters.
Lucas Brothers.
WASHINGTON, D. C.—Wm. Ballantyne.
Taylor & Maury.
WHEELING, Va.—Thos. Hornbrook.
CLEVELAND, O.—Hawks & Bro.
CINCINNATI, O.—John F. Dair & Co.
DAYTON, O.—O. Kittredge.
St. LOUIS, Mo.—Keith & Woods.
J. M. Crawford.
DETROIT, Mich.—W. B. Howe.
CHICAGO, Ill.—D. B. Cooke & Co.
S. C. Griggs & Co.
ROCK ISLAND, Ill.—H. A. Porter & Bro.
Devoe & Crampton.
SPRINGFIELD, Ill.—Francis & Burrell.
MILWAUKEE, Wisc.—Edw. Terry & Co.
MADISON, Wis.—Powers & Hoyt.
NASHVILLE, Tenn.—Armstrong & Co.
LEXINGTON, Ky.—C. S. Bodley.
SAN FRANCISCO, Cal.—J. Q. A. Warren.
VAN COUVER, Wash. Ter.—Wm. Kelley, P. M.
MONTREAL—B. Dawson & Son.
John Dougall.
Thomas Campbell.
QUEBEC—P. Sinclair.
ST. JOHN, N. B.—W. L. Avery.
Jardine & Co.
HALIFAX, N. S.—E. G. Fuller.

WHITE TURKEYS.—A few pairs of beautiful White Turkeys may be obtained of the subscriber—price, $5. Also, two pairs of Peacocks, in full train—price, $6. A few White faced Spanish Chickens may be had at $7 per pair, or $10 for a trio—one cock and two pullets.

The above prices includes cages and delivery at Express office in Poughkeepsie. Apply to

C. N. BEMENT,
Springside, Poughkeepsie.
Dec. 23—weow2tm2t.

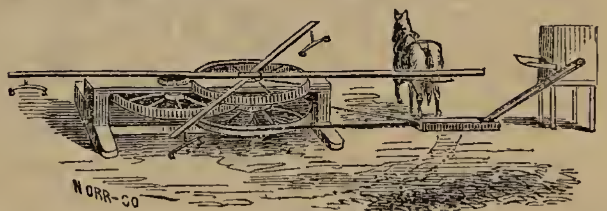
PIGS—SUFFOLK and BERKSHIRE Blood, for sale by

W. H. CLAY,
Staten Island.
Office No 82 Wall-st., New-York.
Dec. 16—w&m1t*

INVENTORS — PATENTS — PATENTEES.—Persons desiring to secure Patents in the United States or Europe can receive full printed instructions, free of charge, by addressing MUNN & CO., Editors of the Scientific American, New-York City.
Dec. 2—w9m2t.

FARMERS—If you consult your interest, you will not fail to send for a Circular, which will give you a description of the three greatest labor-saving implements of the age, viz., *Share's Patent Potato and Corn Covering and Hoeing Machine—Share's Patent Cultivating and Hilling Machine, and Share's Patent Sod and Soil Pulverizer, or Coulter Harrow*—all of which will save double their cost in the first season's use. They can be made by no other parties but the subscribers *for this vicinity*. Last season the demand for them was so great it could not be supplied, and if farmers are desirous of obtaining them the coming spring, they would do well to order them immediately, to be sure of getting them. There are no implements now made which give such universal satisfaction, and they were introduced and used in this vicinity the last season, and created a perfect furore. The price is within the means of every farmer who cultivates 25 acres of land. Whoever uses them once, will not do without them if it is a possible thing to obtain them. Address

PEASE & EGGLESTON,
84 State-st., Albany, N. Y.
Dec. 23—w1tm1t



JANUARY, 1859—HORSE POWERS AND THRESHERS.—The undersigned take occasion to give new notice that they continue to make and sell the "Improved Patent Portable Lever Four Horse Powers and Threshers."

The Power is simple and compact in construction, and readily understood by any one. It is not liable to get out of order, and can be worked with one, two, three or four horses.

The Threshers are of two sizes, numbers 1 and 2 suited to the power.

Experience proves that these machines give entire satisfaction in all respects, and that they are not only *cheaper and more economical, but as, or more efficient* than others more expensive.

Two hundred bushels or more of dry wheat are threshed in a day with these machines.

Weight of Power about 550 pounds. Weight of driving wheel for do., 300 pounds; or altogether about 900 lbs.

Weight of Thresher about 200 pounds.

Price of Power complete..................	$85.00
Price of Threshers, No. 1 & 2,............	$30 & 35.00

Cost of Patent Leather rivetted band 40 feet long, 3½ inches wide, $10.

☞ Terms cash on delivery in this city. Orders promptly attended to,

PLANT BROTHERS,
General Commission Merchants,
75 Pine Street, N. Y.
Jan. 1—m1t.

FARM BOOK-KEEPING.—By W. D. Cochran of Detroit. Sets—comprising *Full Instruction* in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully,—also *Day Book* and *Ledger*—for sale at this office—price by mail, post-paid, $2.30. L. TUCKER & SON.

The Country Gentleman."

THE COUNTRY GENTLEMAN will enter upon its Seventh Year and Thirteenth Volume with 1859. Its progress with every recurring volume has been marked, and there are two unerring indications as to the character of its subscription list at this time, to which we may especially refer—the Contents of its pages during the year now drawing to a close, and the pressure that has existed upon its Advertising columns. The increase in the number of contributions to all departments, Agricultural, Stock, Horticultural, Gardening and miscellaneous, has never before been so great. Nor have the contributions themselves ever combined greater instructiveneis and interest, or been more thoroughly marked by the practical experience of their writers. As an acknowledged center of information and channel of communication with the public, on Rural Affairs, the Co GENT has never progressed more rapidly than in 1858 And in circulation, that it has not taken a single backward step, in a year that has witnessed the decrease by thousands upon the subscription lists of most of its cotemporaries, affords as much source for congratulation as a large *increase* in ordinary "times." Now that we are all in a measure upon our feet once more, knowing where we stand and insearch of means to help ourselves forward, the friends of a journal like this should endeavor to place it in more numerous hands, and to open a way by its enlarged circulation, to a renewal of activity in the mind, as well as on the farm, and through the business of every new reader. When prices are ruling low it is time for the go-ahead cultivator to make his next crops greater; when past crops have been cut off, he should be on the look out for preventives and remedies; when he sees his neighbors disposed to give up in dispair and let things "work" as they will, then is the time for him to bestir himself—and if he be charitably disposed, to extend to others a helping hand.

"DON'T STOP IT."—This extract—which we recently made from a western subscriber's letter about the Co. GENT, has elicited a number of similar and cheering responses. A reader in Hancock Co., Ill, enclosing two year's subscription, adds—

"I hope, as another western subscriberhas said, that you *will not* 'stop my paper,' for I cannot well get along without it, although I am taking fully a dozen others, one half of which belong to the agricultural and horticultural class, and I think yours *is beyond doubt the best weekly agricultural paper published in the United States.*"

Another in returning his bill accompanied with the money—for the Co. GENT, writes on the back of it, (Pope Co, Ill,)

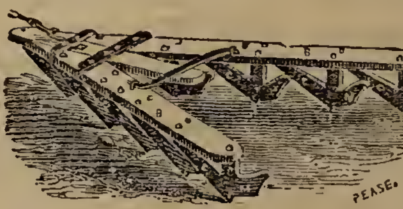
"I forfeited the terms of this bill, but it is cheap at $2.50 per year. I would only wish for a reduction of the price to get others to take it. I wish you to consider me a life subscriber—'don't stop it' I live in 'Egypt,' the land of darkness. We want agricultural light and the COUNTRY GENTLEMAN to make it one of the finest parts of the U. S. A., and the great fruit country."

A FIRST RATE AGRICULTURAL JOURNAL.—It gives us real pleasure to call the attention of our readers to *The Country Gentleman*, a first class family paper, published weekly in Albany, N. Y., at $2 a year, by Luther Tucker & Son. *The Country Gentleman* is got up with superior taste, on excellent paper, clear type, with handsome illustrative engravings, and is printed in a superior manner. It is published in quarto form, suitable for binding. So much for its mechanical execution. In other respects it is unsurpassed by any other agricultural journal. Besides numerous intelligent correspondents in all parts of the country, it contains the best thoughts of the best writers, in all the departments of rural affairs to which it is devoted. J. J. Thomas, one of the editors, and Luther Tucker, one of the publishers, are among our most experienced agriculturists. Subscribe for *The Country Gentleman.*—*Life Illustrated.*

The Annual Register.

☞ "WORTH *five times its price* to any one who can read English"—so says a correspondent, in speaking of the ANNUAL REGISTER for 1859, just issued. Were it not that we frequently receive inquiries on the subject, it would be superfluous to add that the back numbers of the REGISTER may at all times be had at their original price—25 cents each, paper, or 50 cents cloth. Five are now before the public—from 1855 to 1859 inclusive. The first three have also appeared in a new edition on much larger and finer paper—bound in one volume—price $1.

☞ "YOUR ANNUAL REGISTER is duly received, and is, as usual, a gem of a little thing. The "Farm Management" has been highly interesting to me; the "pictures" are suggestive reminders even to the best of us, and we can but look and see whether some of the hits do not apply. "Slipshod's" barn is certainly considerably in at the roof, and altogether dilapidated; his fence and gates very much awry; his tools and implements a stumbling block in the snow; his horses very thin, even if not inferior to "Thrifty's" fine team; his orchard pitiable to look at, and his corn patch would starve a mouse. *Country Dwellings* is a splendid theme for agricultural works to dilate on. Iron for garden furniture is much to be preferred to wood in any climate, from its durability; still stiffness peeps out in spite of its imitation of wood. *Under-draining!* Oh, that our prairies could be more easily drained; you of the hilly country beat us there; the chapter on draining, in the Register, is worth all the money asked for it. Not less so is the list of Nurserymen; it gives us a peep at the Leviathans of Rochester. Then Dexter Snow gives a chapter on the Verbena. *Street trees*—Don't that little fellow look nice? Yet how few, after spending quite a sum for trees and planting, think of guarding them in so simple a way! A few go to quite a useless expense to guard their trees,—the remainder "let them take their chance," which generally ends a failure. E. S. *Chicago, Ill.*



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The experience which he has acquired in the last ten years, by numerous and important invoices to the U. S., and the especial culture which he has established for that market, upon an area of over 300 acres, are for his customers a sure guarantee of the proper and faithful execution of their orders.

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THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES

VOL. VII. ALBANY, FEBRUARY, 1859. No. II.

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Appropriate Notes.

NOT TOO LATE TO BEGIN.—As opportunities recur during the whole winter and spring, it is hoped the friends of the CULTIVATOR will use their influence to extend its circulation. All subscriptions begin with January, and we supply the back numbers in any desired quantity. There are many single subscribers (one at a Post-office) now on our books, and if not only they, but also those who are already members of clubs, will think over the list of their neighbors, we are confident they could each find a dozen or a score of those who as yet are taking no Agricultural paper, and whose names could be procured by a little effort for the CULTIVATOR.

ADDITIONS TO CLUBS ARE SENT AT CLUB RATES.—Clubs need not all go in one name or to one Post-office, but each copy will be sent to any desired address. Those who have undertaken to form clubs need not wait, if their subscribers are in haste to receive the paper, until the full number is completed, but may send on, upon club terms, and we will trust to the future for the completion of their lists. We say this because it sometimes happens that where four or six or eight subscribers are obtained, the effort to procure the others is put off until the interest in the matter abates, and finally those who really want the paper are disappointed.

OUR CONTENTS—NUMBERS FOR DISTRIBUTION.—The present as well as the January number of the Cultivator, is among the best ever issued, as far as range and variety of contents is concerned, and we call particular attention to the number of farmers whose practical experience is here given from their own pens and in their own language. We should like to send any desired quantity of the January and February numbers for examination by those who would read and appreciate them, and we shall be much obliged to any of our friends who will either send lists of names to whom we may mail samples, or who will undertake to distribute a few copies themselves.

THE ANNUAL REGISTER.—The inducement given to clubs, by the offer of this work, is no small one. Containing engravings which have cost us several hundred dollars, it also has been uniformly commended as really a *standard work* on every point of which it treats. Says the *New-York Tribune:* "The best treatise we have anywhere seen on the subject of Draining, is found in the *Annual Register* for 1859," and the same article received the highest public tokens of approval at the Annual Meeting of the Ohio State Board of Agriculture, and on several other similar occasions.

THE SALE OF THE RDGISTER.—There is perhaps scarcely a neighborhood in which, even if a club for the *Cultivator* and *Register* could not be made up, a dozen copies of the latter might not easily be sold. It retails for 25 cents per copy, but we send *a dozen copies post-paid for* $2! And we should be much obliged to those who, if they cannot undertake to dispose of a dozen or two themselves, would induce the postmaster, the store-keeper, or some other party, to send for a quantity to sell as above.

BACK VOLUMES OF THE CULTIVATOR.—We now offer for sale Complete Sets of the Third Series, comprising the six years, 1853-54-55-56-57 and '58, handsomely bound in Muslin gilt, and sent by Express to any part of the country for only $4.50. The price by mail, post-paid, is $1 per volume. Each is furnished with a full index, enabling the inquirer to turn to more or less that is suggestive and useful on almost any subject that may come up in connection with Rural Pursuits.

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Manure of Fattening Swine.

In an article on "Fattening Swine," some weeks ago, (Co. Gent. Oct. 21, 1858,) we suggested as subjects for future discussion—the rearing and management of pigs—preparation of food for fattening and feeding—the arrangement of pens—the management of the manure produced—also those recently made the subject of communications from "B. F." viz: "Proper Age of Fattening Swine," (Co. Gent., Nov. 18, 1858,) and "Wintering Pigs," in the number of the succeeding week. We hope these and other topics named will receive the attention of correspondents. We shall meanwhile offer some hints on the best management of the manure of fattening swine.

"Pig's dung," says Johnston, is still colder and less fermentable than that of the cow. * * * It is best employed in a state of mixture with the other manures of the farm-yard." "It does not," says Browne, "ferment and mellow as well in the earth, when used alone, as when mixed with the dung of cattle and horses, and it is so rich and stimulating that it is difficult to spread it thin enough when applied by itself." Those who would learn its value as shown by chemical analysis, and compared with other manures, are referred to the Cultivator for 1850, p. 198, where will be found full information from Prof. J. H. Salisbury in regard to the same.

From its unfermentable character, hog manure suffers little loss during cold weather, however managed, unless exposed to long washing by rains. In the spring, however, it will be found poorly fitted for application to the soil—remaining a cold, saponaceous mass, not readily mixed with the soil. We have found a good practical result to follow mixing the manure from the hog pen, where swine were fattening, directly with that from the horse stable, the rapidly fermenting character of the latter reducing by spring the former to a proper state for use. The cobs of the corn used for the last month's feeding our pork, became well rotted, and the horse dung, though in heap, did not fire-fang or burn, as it would have done without this mixture.

Hogs when fattening should not be expected to work at compost making—they ought to get sufficient exercise in eating, to be willing to rest the remainder of the time; and reason would teach us that their manure is not as valuable for composting with "muck, leaves, turf and other vegetable refuse," as manures of a warmer character. Store swine might be allowed this sort of exercise, especially when the dung of horses and cattle are to be mixed with the absorbents above named, and would accomplish a good work at composting, all the better if any grain was to be found in the mass, either having passed undigested through the stock, or having been thrown in for the purpose of inducing the swine to root for it.

For reasons before stated, we would either compost hog and horse manure together, or remove both to the barn-yard, making that the common receptacle of all the manurial substances within our reach, (save, perhaps, hen dung and night-soil, which could be more economically employed by other methods of management.) The latter would be the best course, but if convenient in any instance, we would at some time during the winter, pile the hog manure in thin layers, with an equal amount of horse dung between each, and a covering of earth or muck over the whole. This would secure decomposition without loss, and furnish a quantity of fertilizing material of excellent character for application to spring crops—corn or roots for instance. The labor bestowed in this way would be well repaid, and a large saving result over the usual wasteful method of allowing it to remain under the eaves of the hog-pen, to be washed by rains, or to be scattered far and wide by pigs running at large as is too often the case.

Winter Care of Farm Stock.

In most sections of the country there was an average crop of hay, but as a general thing over large districts the oat crop was either a failure or a very light crop. Over a large portion of the Northern States the foddering season for young stock and sheep this autumn commenced about one month earlier than it did last year. Should we have a very cold winter and late spring, in all probability hay in many sections will be 'scarce and dear' before the cattle can be turned off to pasture. In anticipation of such an event, it becomes all who have the care of stock to use strict economy in feeding—but by economy we do not mean half-starving the stock for the purpose of having hay for sale when it commands a high price. If the hay is of poor quality, it should be fed a little at a time and often, or mixed with corn fodder or a small portion of good hay; occasionally it should be sprinkled with brine. If a small portion of finely chopped apples, potatoes, roots or cabbage is mixed with hay of poor quality, it somehow seems to give it a seasoning, and they will much more freely eat it than if given alone. It is a miserable business to compel farm stock to feed wholly on poor hay all the early part of the winter; they will thus lose flesh and get down poor, and the best of English hay given through March and April, will not fully restore the lost muscle and fat. Self-interest should prompt the farmer so to keep his stock that they should go to pasture in as good, if not better condition than when they came to the barn.

List of Fruits for the West.

Will you please furnish a list of fruits suitable for a farm of 80 or 100 acres, to afford a full family supply, and a proper succession extending the circle of fruits throughout the year, and adapted to our climate? A. G. H. *Waukesha, Wis.*

It is difficult to give a precise list, as in some seasons the crop will be ten times as great in some years as others; and again some will bear abundantly and others fail in the same season. The following however, will serve as an attempt or approximation:

Early Summer.—Early Scarlet, Wilson's Albany, and Hooker *strawberries*—two or three square rods, well cultivated in drills.

Early and Mid-Summer and Later.—Red and White Dutch currant, Cherry, White Grape, and May's Victoria, one to two dozen bushes each; two dozen Houghton's gooseberry; Fastolff and Franconia raspberries, one dozen or more each, and three dozen Brinckle's Orange, all to be laid down in winter; three trees Mayduke cherry, three of Early Richmond, one of Belle de Choisy, and four of Belle Magnifique; a dozen each of Dorchester and Rochelle blackberries.

Late Summer.—Red Astrachan, Sops of Wine, Carolina Red June, High-top Sweeting, Early Joe, Benoni, Sweet June *apples*, each two trees; Tyson, Rostiezer, Osband, and Brandywine pears, each two trees. Some currants and blackberries will continue till this time.

Autumn.--Oldenburgh, Late Strawberry, Fall Orange, Dyer, Gabriel, Maiden's Blush, and St. Lawrence apples, each three trees; Flemish Beauty, Buffum, Fulton, Onondaga, and Stevens' Genesee, each two trees; the two first being very hardy, might be planted in greater numbers. If *dwarfs* are desired, for coming soon into bearing, they may be of the following sorts, which are among the hardiest at the west, and which do well as dwarfs;—Buffum, Osband's Summer, Oswego Beurre, Tyson, White Doyenne—and Glout Morceau and Easter Beurré for winter,—three to six each—more of the two last. The Delaware, Clinton, and York Madeira grapes,—two to six vines each—the Delaware is the most valuable.

Winter and Spring.—*Westfield Seeknofurther*, Jonathan, Fameuse, *Yellow Bellflower*, Winesap, *White Winter Pearmain*, and Mother apples, each five sorts, except those in italics, of which there may be ten each.

Those living at the west, who may be well acquainted with those fruits which do best there, may add to or modify the list.

Extracts from a European Letter.

[We make the following interesting extracts from a private letter to one of the Editors of the Co. Gent., under date of Paris, Dec. 12, 1858.]

"We have made a short trip to Germany, and I had the advantage of looking at the country in a more agricultural point of view than ever before, and of noticing the preparations for winter by the farmers. We visited Cologne, Gottingen, Berlin, Dresden, Frankfort, Heidelberg and Strasbourg, and found the weather colder than when we left here, and snow upon the ground in several places. Indeed the season seemed almost as chilly as it could be with us, though the ground was little frozen, and plowing was going on. Quite frequently we saw in the southern part of Germany, and in France, green crops starting from the ground. The country is very highly cultivated everywhere, but with immense labor, and with less results than we should expect. In general, the implements are of the most old fashioned sorts, and the tillage too, nor are the animals so fine as one would expect.

"I should think that agriculture in France was far in advance of that of Germany. We rode through a magnificent wine country in coming from Strasbourg here, and noticed the exceedingly careful cultivation here. It is a striking feature of the country to an American, every where in Europe, you know,—the *want of fences*. But in some parts of France much land is wasted in ditches and hedges as boundaries. This is better regulated in Germany, where in many parts by the association of landholders for the consolidation and redivision pro rata of value, each property is made snug and compact, and, where the divisions are marked by boundary stones simply, great advantages have been obtained.

"The cheapness of labor and the necessity of providing it, in connection with the evil influence of the monopolies held or farmed out by government, together with the influence of old customs and prejudices, hold all practical and scientific progress rather in check as compared with our country.

"Everybody I think must wonder over and admire the fertility and natural advantages of France. I had an opportunity especcially of noticing this last summer in Normandy, where not only the luxuriance of the crops was astonishing, but we saw often the most fertile country reaching down to the very brink of the sea, so that I remember our room in the little house where we were had one window on the bare sea beach, and the other on the richest wheat and best fields that I had in a long time seen. The really fine horses one sees here in Paris, you know, come from Normandy. The draft horses everywhere here seem good; magnificent stallions do all the heavy work, and seem to make but sport of the heavy drays and omnibuses. The traveller by hired carriages is never troubled here with the sight of such miserable skeletons of hacks, as are often appropriated for this work with us. For the lighter carriages they have a sort of pony, perhaps about 12 hands high, which seems to keep as fat and well in its work as the omnibus stallions in theirs; and so, everywhere here, you notice that particular breeds are kept for particular purposes.

"The carriage horses and pleasure horses of every kind however, as well as the horse of all work, do not seem to compare well at all with our own, so that it is the common exclamation of Americans on the Promenades here, 'What miserable horses!' although they are driven in all the style and more too, than is their due. Draft stallions reach often 1,500 francs and over, and fine carriage horses command still larger prices.

"Of the keep of horses here I of course know little, but I think it consists much less of unmixed grain than with us, but rather of prepared food.

"Both the French and Germans seem to me, and I believe to all Americans, to be miserable horsemen, and for their use what we should consider an overtraining of the horse seems necessary. The best riders and drivers, as well as horses, seen on the continent, are from England. In fact it is the superlative qualification of a pleasure horse to say that it is 'English.' This, wherever you see it, shows in splendid contrast to the eye of a horseman, by its quiet action—with a neat trot skimming the surface of the ground, in comparison with the pawing and sprawling action apparently admired here. His delicate head and limbs, too, point out a different stock. The Royal houses cultivate everywhere in their studs, I believe, the English stock, or one similar to it. I have been told, however, that the province of Calvados made the Emperor—who is said to be a good judge of horseflesh, on the occasion lately of his visit there,—a present of twelve horses for his own stables, and there are several studs in Normandy, where the stock is said to be very fine, but what it is I don't know.

* * * * * * *

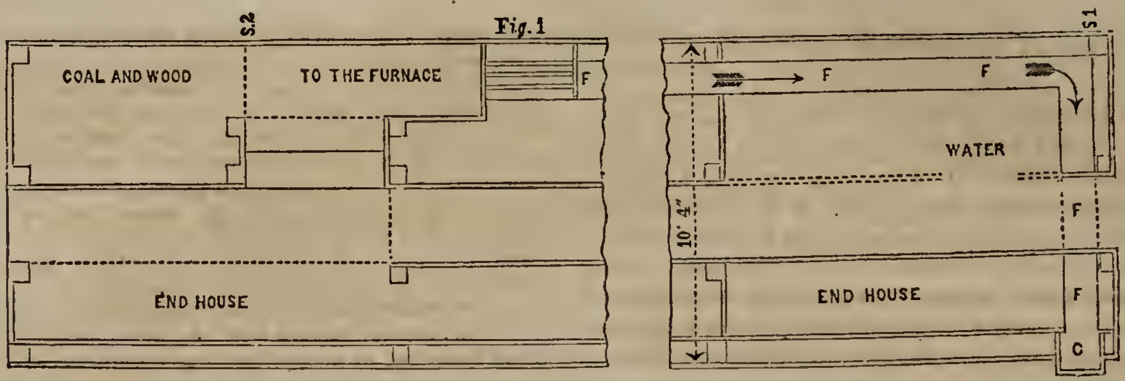
"The weather here is yet quite mild; one does not often see ice, but fogs surround us continually almost, and we have rarely a really pleasant day. The charity balls, of which much is made, are beginning now, and soon the Carnival will be upon us with all its sights and pleasures. W. P. P."

Cheap Underdraining.

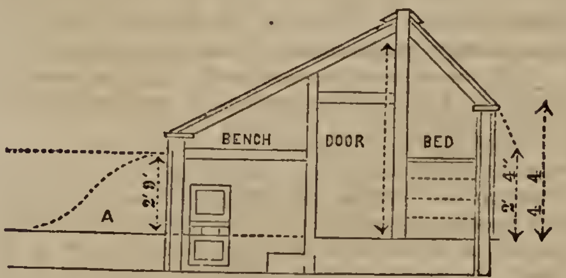
Robert B. Howland of Union Springs, N. Y., whose farm of several hundred acres is a hard clayey soil, with hard-pan subsoil, undertook at our recommendation, three miles of drain, which he commenced during the past month after winter had set in, and the ground had become frozen, using the "subsoil loosener" recently advertised in this paper. Before the close of the month he had completed the whole to a depth of three feet. Although the cold was occasionally quite intense, yet by keeping the surface of the earth in the ditches broken up and mellow over night, there was no freezing to produce any inconvenience. Indeed, he found an advantage in a frozen surface, by giving a firmer path for the horses. After a ditch is cut a foot deep, it requires very severe cold to freeze the earth in the bottom—that which is intense enough to form a crust three inches thick at the surface, will scarcely affect it. The cost per rod of the three miles of drain, varied from ten to twelve cents, but was mostly about ten cents—the depth, as before stated, being three feet, and the soil hard and tenacious. Tubular tile was used for the channels.

Good Crops.—G. M. Atwater, Esq., of Springfield, Mass., has raised 96 bushels of "King Philip" corn on an acre of ground the past summer, and last year sold 29,600 pounds of carrots from an acre

Fig. 1



GROUND PLAN (SHORTENED) OF MR. DINGWALL'S GREEN-HOUSE



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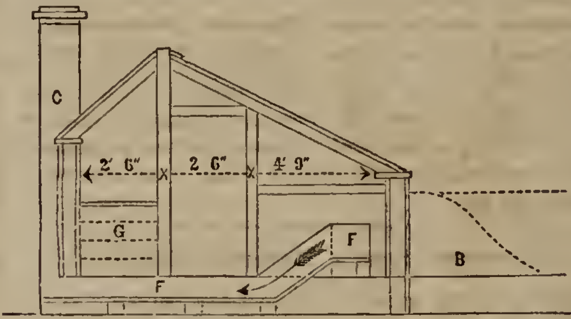


SECTION No 1

[We have had engraved to save space, but a part of the working drawings furnished us—which, however, with the accompanying detailed description, will, we think, answer every purpose.]

Fig. 1 represents a ground plan, drawn upon a scale of a quarter inch to 2 feet—except that of course the length is diminished by *taking out a portion of the drawing in the center* between the crooked lines, the parallel lines that are there cut off having only to be extended to their proper length, in order to give the whole plan upon an exact scale.

The extreme length of the whole is 124 feet—its width from outside to outside 10 feet 4 inches. At the ends are two divisions, as will be noticed, each just 12 feet long, used for other purposes—the length of glass framing being in full exactly 100 feet between these two ends.

At the lower end (on the left) is the furnace, with accommodations for fuel and some spare space for other purposes. Section 2 shows the arrangement here—the section being taken where marked (s. 2) on the around plan.

The flue leaves the furnace, passing along the floor, as shown in the ground plan at *f f f f f*—out at the chimney (*c*) in the lower right hand corner. This flue is laid on iron plates 3 feet long, 1 wide, and 3-16ths or one-quarter inch thick, which are cheaper than bricks and answer admirably their purpose. (Iron must not, however, be used for the top of a flue.) The plates are raised up two and a-half inches upon bricks laid under the ends of every two plates—the intervals allowing of the free circulation of air beneath the greater part of the flue.

At the right end of the ground plan will be noticed *s.* 1—here section 1 is taken—which latter shows at *f f* how the flue is carried down beneath the path, across the house and up the chimney (*c.*)

The space marked in section 1, 4 ft. 9 in. wide, shows how the bench or stand passes above the flue; it contains 4 inches of sand for plants. The path, extending the whole length of the house, is 2 ft. 6 in. wide, and there are 2 ft. 6 in. more on the other side of this passage, the earth from which (at *G*,) if the surface level is at its top, need not be excavated, and only its top fitted as a bed or stand for plants; or if the surface level is below, this space had better be filled in with earth to the requisite hight (2 ft. 4 in.,) and the earth also made up in front of the building to the hight and in the manner shown at *A* and *B* in the two sections.

The twelve feet constituting an end house at the upper end, are used for water as marked, and above for shelves for pots, potting bench, &c., while both this and the end house below serve as storm doors to the interior.

The front sashes are 8 feet long by 4 wide, and the back sashes 4 feet long and 4 wide.—EDS. CO. GENT.

Green-Houses on the Ascending Principle.

MESSRS. EDITORS—The merit of originating the construction of green-houses on the ascending plan, is due to Mr. JOHN DINGWALL, florist, of Albany, who well deserves the thanks of the fraternity and others for his valuable discovery.

In situations where the nature of the ground is favorable, its economy and efficiency will be found most obvious. The degree of ascent best adapted, seems to be a rise of 10 feet in 100, but a foot or two less or more would not materially affect the principle of the equal distribution of heat from the flue, which is the whole feature of this discovery.

The accompanying plan of a green-house erected by Mr. DINGWALL last fall, and which, he informs me, worked admirably during the coldest weather of last winter, will best convey an idea of the value of this method.

It will be observed that the unusual length of the green-house and sheds—124 feet by 10 in width, is all *equally* heated by one furnace and one run of flue—a result which would never occur if the house was built on a level. A difficulty always felt by us in heating by flues in long narrow houses where it is inconvenient to have more than one run of flue, has always been, that at the one end the plants are scorched up by the heat given out around the furnace, while at the other they are chilled or frozen, and this too, often when the length of house does not exceed 60 feet.

Through the representations of Mr. DINGWALL, I was induced for the sake of experiment, to get up a forcing pit or green-house this fall on the "ascending" plan, and am much pleased with the result. My house is only 70 feet—all the length the ground would admit of; and when heated by a small flue and tested by the thermometer. I find that what we have always heretofore known as the "cold end," is 28 higher than at the furnace.

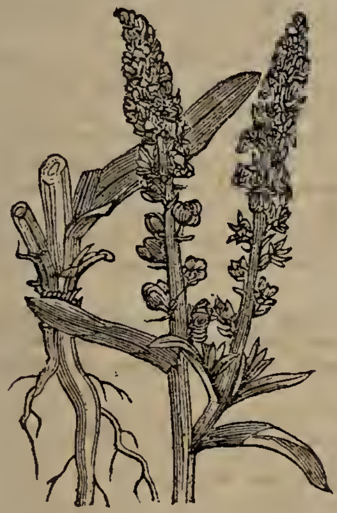
I am of opinion that green-houses constructed on this plan will effect a saving of one-half in fuel, and by giving a uniform temperature throughout, will of course vastly benefit the plants. PETER HENDERSON.

New and Profitable Crops to Raise.

WELD OR DYER'S WEED.

Messrs. Tucker & Son—You inserted in your numnumber of 8th April last, a new and very profitable crop to raise, that I sent you. I will continue to suggest other profitable crops. The one of which I shall treat now is the *Weld or Dyer's Weed*, which produces a splendid fast yellow color. We are in the habit here of substituting quercitron bark to produce an imitation of the yellow color produced by Weld, but it does not give such a good color, and is not so profitable.

The *Weld*, (*Reseda luteolc*) is of the Reseda genera, brother and sister to the *Mignonette*, which every lady knows who keeps a garden. It is an imperfect biennial, with small fusiform roots and stem from 1 to 2½ feet high. Weld is extensively cultivated in England, France and Germany, for dying, for which its flowers, its leaves, its stem and the roots furnish a lemon yellow color, handsome, solid and very advantageous for all kinds of silk, cotton, linen, mohair and woolen goods, far superior to the color of the oak or other barks. Of all tinctorial plants, it offers the cultivator the great advantage that it has only to be pulled up, roots, stem and all, and dried, to be delivered to the dyer. The same yellow color serves for painting also, for the *Dutch pink* is made from it.



WELD.

Weld is a very hardy plant, and flourishes in all kinds of soils; but fertile soils produce more abundantly. Warm, dry, sandy soils produce more coloring matter; but Weld must be put in clean ground, as its infancy is long and consequently has then to be weeded. Another great advantage of it is, that it requires no manure.

Weld is sown in July or August. It can be sown in another crop already established, either beans, Indian corn—even among *wheat* and *clover*, in which case it requires no special previous cultivation, sowing it after the last cleaning of corn or beans, among which it will do best, and admit later, or the second year, to be weeded by the cultivator.

It is harvested in July of next year, when it is in full length, and in bloom, and begins to turn a light yellow color, by merely pulling up the whole plant, and it is done in time to put in a crop of ruta bagas or white turnips, or other late crops, grain, &c. In pulling, put them up in small shocks, so as thoroughly to dry by the sun and dews. A week or less will thoroughly dry it. Keep it from rains. When it is dried, tie it up in bundles of 10 or 12 lbs., on canvass, so as not to lose the seed, which also furnishes a good oil to burn. It can be kept a number of years without altering its coloring qualities; hence its great value, provided it has been well dried—dried if possible in such a way as to retain part of its green color, although that is of no very great consequence.

The produce of Weld depends a great deal on circumstances, but the cultivation of it being so very inexpensive, the profits of it are sometimes very important. An acre may produce from 80 to 120 bundles, worth from 50 to 75 cents, sometimes more.

As it requires only sowing, preferably in rows one or two feet wide, so as to admit the horse-hoe when young principally, and then rolling the seed, they can stand six inches in the row, or even closer. In this way about one and a half pounds may sow an acre if sown by a drill, or as the seeds are very fine, by the thumb and finger a man may sow one or two acres a day. F. A. Nauts. *Near Winslow, N. J.*

How Much Stock to the 100 Acres?

Eds. Co. Gent.—I notice in your issue of the 16th Dec., "A Reader of the Cultivator," desires to know "how much stock may be kept on every 100 Acres." I have been led to make the same inquiries, and by like observations, viz , that our grain-growing system was very exhausting, our lands rapidly deteriorating, and a change was requisite to prevent their becoming worthless barrens. Farming has not been the chief employment of my life, and I have been wholly occupied with other pursuits since 1842, until the spring of 1857, when I assumed the labors of farming, and desire to make some progress in improving that department of industry.

The farm I occupy, (75 acres) furnished 25 loads manure in the spring of 1857—all that the consumed crops of the farm produced. I added 75 acres to the farm, and my crop of manure last spring, made on the farm, was 300 loads, and 200 purchased and hauled from town, made 500 loads applied last spring.

I am wintering now the following stock: 10 Short-Horn bulls—12 Short-Horn cows—9 grade Short Horn and Devon cows—8 yearling Short Horn heifers—2 yearling Devon heifers—4 yearling grade Short Horn heifers—18 Short Horn, Devon and grade calves—5 horses—8 sheep and 4 hogs. I have fodder, roots and grain enough to carry this stock in good condition through a six months winter, and they are making me a fine quantity of manure, to which I shall add by leaves from the forest, muck from the pond, and purchased manure from town, until I have 1000 loads for next year's use, which I trust will enable me to summer and winter a still larger herd of cattle, and larger still each successive year, until I keep 225 head, which is the number of acres I shall have in cultivation in future—or one head to the acre, which is the answer I have given to the question we start with. It is true that my neighbors laugh at me for embracing the absurd idea that one cow, (for it will average equal to one cow, taking old and young, of a breeding and dairy herd,) to the acre, can be sustained summer and winter, and assure me as you do, that it will require three or four acres to the head. That laugh, however, is not satisfactory evidence to me, and I shall seek better evidence in a trial of the experiment.

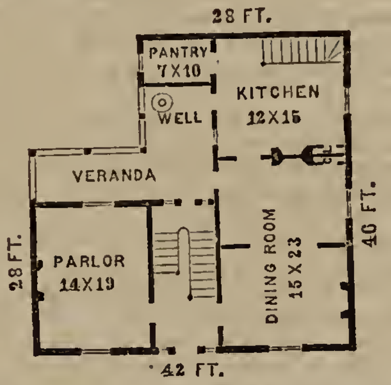
At present I am not prepared to tell how it is to be done, but I will find out and tell you at some future time.

The crops that I shall mainly rely on, besides the hay crop, are corn, rye to cut green, Hungarian grass, broadcast corn, and roots. I have great confidence in corn as a main crop. I believe I can average 75 bush. shelled corn to the acre, and 4 tons of cured fodder; and this quantity, given to two head through a winter of six months, would give each 22 lbs. stalks and 6 quarts corn meal per day. I find I can sow rye early in the fall, pasture calves and young stock upon it a month before winter sets in, then cut 5 to 10 tons of green food by 10th June, and vacate the ground in time for a crop of broadcast corn or Hungarian grass, either of which will produce several tons of fodder per acre of best quality, or green food for August and September, when pastures are dried up. The cattle must have their food cut and carried to them in the main, so as to prevent waste in trampling down the grass and in the manure. The liquid manure must be husbanded, and applied to the soil as carefully as the solid droppings.

Such are the views that I commence the experiment with, and I am glad to learn that others are looking in the same direction for improvement. I hope "A Reader of the Cultivator" will furnish your excellent journal with the results of his experiments and his name. I should also be glad to learn from those having experience in the matter, what crops will produce the largest amount of food for summer feeding stock, at least expense of seed, labor, &c. E. CORNELL. *Ithaca.*

Plan of a House.

WM. G. WOLF of Beaver, Pa., has furnished the accompanying plan, the principal object, next to convenience, being to secure a thorough circulation of the air through every apartment by means of the windows. This appears to be well effected, every room having openings on its opposite sides. It is effected, however, at the cost of material, there being the same amount of outside wall as if the whole structure were square, and enclosing at least one more good room, which might be a bed-room or nursery—or two rooms, if a part of the veranda were dispensed with. Those about to build can choose between more space, or free circulation. The latter would be most valuable in warm sheltered places, and least so on bleak hills.



The chief defect in the plan as furnished, is the want of a lodging room on the first floor, and of a pantry or dish closet opening into both kitchen and dining-room. The last named deficiency may be obviated by converting the present pantry into a store-room, and enlarging the two small closets beside the chimney as much as practicable, to serve as a pantry or dish closet.

The house is intended to be two stories high, each 10 ft. (but on a hill 9 ft. would be enough, being a colder situation,) and the cellar 8 ft.

Value of Carrots.

What is done on a small scale, *with ordinary means*, may be done by the acre. On a square rod of land, occupied for the second year only, as a garden, and consequently well manured, we raised this year nine bushels of carrots—or at the rate of more than fourteen hundred bushels per acre. We could easily select entire acres of land, and by applying sixty loads of manure per acre, at two dressings, easily do the same again. Did any one ever fully appreciate the value of a single bushel of carrots to a cow giving milk and making butter in winter? If so, such a one may understand the benefit which might result to a herd of 20 cows, the whole of which might receive a half bushel per day each all winter from a crop of 1,400 bushels. If worth 25 cents per bushel in saving hay, improving condition, and increasing milk and butter, the whole crop would be worth 350 dollars. Yet the cost of raising need not be a hundred dollars, at ordinary prices of manure in most localities. "High farming" in some matters will not pay, but it will eminently do so in this; and one of the great points of skill in successful farmers, is to know when it will, and when it will not.

Soiling Cattle.

MESSRS. EDITORS—I am engaged in supplying milk for the Boston market, and intend next summer practicing soiling to some extent. In the neighborhood of cities, farming land is too valuable to be used for pasturage, and the soiling system must gradually be introduced.

I should be glad to see in your paper any suggestions as to crops adapted to that purpose, particularly for early cutting, before green corn is sufficiently grown.

Vetches is a crop grown very much in England for soiling purposes, and is very highly esteemed both for increasing the yield of milk and for its butter-producing qualities. This has been tried to a very limited extent in this country, but if the climate is adapted to it, I think it might be found a profitable crop, both for cutting green and curing for winter fodder. If you can give your readers any details as to its cultivation and success where tried, I think it would be acceptable to them.

If this subject of "soiling" should be discussed in your columns, much information might be elicited of practical advantage to dairy farmers. E. R. A. *West Roxbury, Mass.*

Our correspondent will find on another page of this paper, a letter from Mr. CORNELL, showing what he has done, and proposes to do in the way of soiling cattle; and we shall be greatly obliged to any of our readers who can furnish any facts on this subject, which is every year becoming a matter of more and more importance, not only to farmers residing near cities, but to all whose exhausted soils require more manure than can otherwise be made, to bring them into a state of profitable culture.

Superior Beef.

MESSRS. L. TUCKER & SON—We have on our stalls, Nos. 3, 4, 5, 6 and 7, Center Market, Albany, the beef of the prize heifer that was exhibited at the State Fair, which is pronounced to be the best carcass of beef of the weight ever seen in this city. The following is the live weight, and also the weight of dressed beef:

Live weight, 1,780 lbs., two days before killed.

Open fore-quarter,	320 lbs.
Close "	315 "
Open hind-quarter,	271 "
Close "	260 "
	1,166 "

This is 66¼ lbs to the hundred.

This heifer was about half Durham, and half Mountain or Scrub, as called in Kentucky.

We have also the beef of a thorough-bred Durham cow, whose hind-quarters surpass any thing in point of fatness ever seen—the average thickness of fat from the butt of the tail to the end of the loin, is 4½ inches. The live weight of this cow was 1,626 lbs.

Open hind-quarter,	275 lbs.
Close "	265 "
Open fore-quarter,	261 "
Close "	261 "
	1,062 "

This is 65⅓ to the hundred.—CHARLES & VAN METER. *Center Market, Dec.* 27, 1858.

PENNSYLVANIA.—"*I do not know* ANY BETTER WAY TO ADVANCE THE INTERESTS OF OUR SOCIETY, *than to induce our members to read the* COUNTRY GENTLEMAN." J. L. D

Corn Culture in Massachusetts.

Messrs. L. Tucker & Son—I enclose you some statements of corn crops, which you are at liberty to use as you think best.

Mr. **David R. Wait** of Deerfield, one of our wealthiest and best farmers, who now owns the magnificent farm formerly owned and named "Meadow Bank," by the late **Henry Colman**, has this year raised a crop of corn, of 117 bushels to the acre. The land is rich bottom land—three acres—green sward in 1854—to corn in 1855—oats in 1856—corn in 1857. The past spring, early in May, 16 loads barn-yard manure to the acre, were hauled, spread, and plowed under 10 inches deep. The corn, which is the Dutton or 12 rowed variety, was planted three feet by four, with a corn planting machine, which dropped plaster and ashes in the hill at the same time. A peck of seed was used to the acre.

It was "cultivated" with a horse, and hoed three times, keeping the ground as level as possible. The top stalks were cut in September, and the corn harvested October 18 to 23. It was in excellent condition, and the corn from the three acres was picked, husked, and measured, and also weighed. It measured 329 bushels 17 quarts, or at the rate of 109 bushels and 27 quarts to the acre. By weight, the legal standard in Massachusetts, there were 117⅔ bushels to the acre. It was shelled and dried before measuring, but of course will shrink some. It however, is now worth at his crib,

90 cents, which would give,	$317.75
6 tons fodder at $5 per ton,	30.00
And as the product of the three acres,	$347.75

The expenses were reckoned as follows:

Plowing and harrowing $5 50—seed 75c,	$6.25
48 loads manure hauled and spread, at $1.25,	60.00
Plaster and ashes,	5 00
Planting with machine,	1.50
Cultivating three times,	3.00
Hoeing three times,	11.00
Harvesting,	25.00
Total expense—leaving the unexpended manure to offset interest on land,	$111.75

Leaving a net profit of $78 66 per acre, and the land better than before the crop was put in. The corn every where in this section is uncommonly fine.

On one acre and three-quarters of land—in corn last year—we this year raised 170 bushels and 18 quarts, or at the rate of 97 bushels and 4 quarts to the acre. Ours was the eight-rowed Connecticut river corn, early and sure—13 loads of green manure plowed in, and 13 loads of compost, dropped in hills, to the acre. The corn was planted by hand, May 1, 3½ feet each way—cultivated and hoed three times—ashed at first hoeing. The corn was topped Sept. 15, and harvested Oct. 15. It was very dry and in good order. The committee who viewed it, pronounced it the handsomest piece of corn they had ever seen. There was not one quart of soft corn on the whole acre and three-quarters, and almost every ear was filled out clear over the end of the cob.

The top stalks we always cure carefully, and spread a little salt over when packed in the barn and sheds. When fed out, they are always cut, as is everything in the way of litter, so that we have no *long* manure to get out in the spring.

Our compost is made of muck, of which, every fall, some 75 loads are carted into the yards and under the sheds, the manure always being under cover.

We have three tons of top stalks, worth $5 per ton; deducting these from the whole expense of the crop, ($81.00) shows the cost of the corn to have been about 38 cents per bushel, which is rather below the average cost of corn here.

The corn that we raise here is very heavy, and makes a very rich and nutritious meal. **James S. Grennell**
Greenfield, Mass.

Cost of Growing Oats.

Messrs. Editors—In one of the late numbers of the **Country Gentleman**, (Nov. 11, 1858,) I gave you some details with regard to the expense and profits of the corn crop in this section of the country, taking my own experience as the guide.

As the oat crop is the next in importance, of all the cereals we grow here, since wheat and barley have become so uncertain, I have thought it might not be out of place to look a little into the expense and profits of this item of farm account. I think it is conceded by every practical farmer, that it is an exhausting crop, and requires a strong soil to be highly remunerative. It is also objected to as a crop unfavorable to the seeding with grass at the time of sowing the oats; but this objection is not serious, if the soil is really in a good state of cultivation, and not too much of the oat and too little of the grass seed used in the seeding. It is not so desirable a crop for seeding down to grass with as rye, wheat or barley, as the straw is more apt to fall over and smother the young grass, particularly where the oats are sown bountifully on a rich soil. On such soils I would never sow over two bushels to the acre. I would rather sow less than this quantity than over; but the grass seeding should be liberal.

This crop is a desirable one with us, on account of its certainty. It never fails, though it is better some seasons than others. In order to insure a good crop, it should be got in as early as possible in the spring; thus fall plowing for the crop becomes important, and deep culture also, that the crop may withstand the test of any severe drouth of early summer. In an experience of the last twenty years I have never failed of a fair crop, and a good catch of the grass seed by the practice here suggested.

The light seeding and early sowing, enables the straw to expand and get a strong vigorous growth that will hold up a heavy ear, and if it does, under a gale of wind and rain, fall over, it does not lay flat and prostrate—only partially lodged, and generally not until the ears or heads are filled out with the kernel. Such a phenomenon as a total failure of the oat crop in Vermont, or in New-England, was never known, or at least I have never read or heard of any such account. In 1816 we lost the corn crop, but all the small grains were good.

Here amidst the green hills and valleys, and sterile mountains of Vermont, where we have six months winter, where seed-time and harvest, though sure to come, crowd upon each other so closely as to tax our energies to the utmost, we can scarcely conceive or comprehend how it is, or why it is, that the virgin soil of the far-famed prairies of the West should report this hardy crop "a total failure." It is always a matter of regret to the whole country that any of the necessary fruits of the earth should be cut off; but New-England, with the rest of this northern world, can furnish the oats this year, for the crop here was never better. It may have a tendency to render us more contented with our lot and in less haste to emigrate, when we read accounts from this fruitful and highly productive land, that "wheat is but half a crop, corn about two-thirds, oats an entire failure, barley but little grown." It almost makes us say, "we desire no change, and least of all such change as you would bring us." We will not exchange our winter snows for your rains and mud, nor our consumptions for your bilious fevers, chills and agues.

But I am getting off from the subject. I began to write about the profit or loss in the farm account, of growing the oat crop, and let us see how it is. There may be and frequently is a loss in this crop without "a total failure," for, like corn, the cost is more than most farmers who have not kept Dr. and Cr. with the crop imagine. The crop must be a good one to pay a profit; a light or poor one will hardly do it. The cost by the acre is somewhat in proportion to the yield; the harvesting, threshing and drawing to the nearest market, is considerably enhanced by the increase of bushels—the largest crop always paying the best. I find by my farm account, that the whole expense of the seed, top-dressing with gypsum, and the labor until the crop is delivered in bushels at the nearest railroad station, (3 miles,) averages $14.00 per acre. To this should be added the interest on the value of the land, the annual cost of keeping fences good to protect the farm crops, the annual cost of keeping farm buildings in repair to house the crops, the interest on the cost of these farm buildings, and the taxes on both buildings and land. That is to say, we should divide all these last items of expense between our crops, apportioning to each crop as near as can be its portion of this expense; otherwise we are always deceiving ourselves in the cost of our productions. Thus should be charged to the crops 10 per cent. of the cost of the farm buildings, for their use; this will no more than give us 6 per cent. on the outlay and keep repairs good, and the insurance from fire. Then the interest on the land at what it is worth per acre, varies as to its locality, state of cultivation, &c. Oats may be grown in some sections of our country by the acre much cheaper than in others; even the labor is less in some places; and the value of the land, the cost of buildings, and the fencing materials, will vary the cost of this or any other crop materially. The value of the land on which I grow all my farm crops (except pasture) is $100 per acre, exclusive of buildings; consequently the interest and the taxes are much more than where land is worth $20 per acre. I must obtain good crops to make it a paying business. I find it necessary to add $11 00 per acre to cover the expenses of the last enumerated items, to the $14.00 first named, to cover all the expenses per acre of an oat crop, as the crop averages with me from year to year. This $25 00 per acre, cost of raising, may seem large to some. It did to me until I tested it by actual experience.

Now for the balance sheet: My crop has not averaged less than 60 bushels to the acre for the last seven years, nor the price per bushel less than 45 cents, and from that to 67 cents. The past season I had eleven acres only—about half the quantity I have had some years. More than half of this eleven acres was on the inverted sod, which never will be quite as heavy as on land planted with corn the previous year, with a generous manuring. The yield is 67 bushels to the acre, average, and the price now is 45 cents, with a prospect of a considerable advance before another harvest; which prospect, in common with many others, I shall probably wait to realize, on all that portion of the crop not wanted for home use. By putting the crop now into market, 67 bushels at 45 cents, $30.15—straw for winter feed, $1 50—making the value of the crop per acre, $31.65; deduct cost, $25, leaving net $6.65, over and above every item of cost or expense; or in other words 12⅔ per cent. on the value per acre of the land.

I know, Messrs. Editors, this is not a very large profit, but it is about equal if not better than many other investments, and has the advantage of being much more sure than most others; less harassing, less wear and tear to the mental faculties, and more invigorating to the physical. I am now speaking of farming in general—of no one crop in particular. It is the most reliable, the most pleasant for those who have a taste and inclination for it—the safest, the most conducive to health and happiness, to peace of mind and vigor of body, of all or every other pursuit under the sun. J. W. Colburne. *Springfield, Vt.*

Plan of a Sheep-Shed,

Forming One Side of a Barn-Yard.

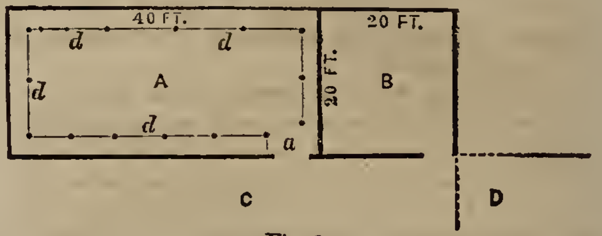


Fig. 1.

Fig. 1.—A. Plan of Shed, 40 by 20 feet—*a.* Entrance for sheep, 4 feet wide—*d. d.* Boards composing one side of racks; the sides of the shed are the back sides of rack—C. Barn-yard—D. Barn—B. Calf stable, and for parturient cows.

Fig. 2.—E. Top board of rack—F. Bottom of rack—G. Studs, the boards pinned to them.

The upper edge of the bottom board should be 18 inches from the ground for full-grown sheep, and the distance between the boards 8 inches. The studs should stand 16 inches from the inside of the sill, and 6 or 8 feet apart. Pin or nail a strip of board on the studs, with a piece of board between and at each end, so that the top and bottom boards of the rack may be moved easily up and down, as the manure in the shed requires; and bore holes through both for the pins that hold up the boards. More than one hole should be bored for each board, as the manure will accumulate during the winter, and the boards will need raising 4 or 6 inches at a time, once or twice. R.

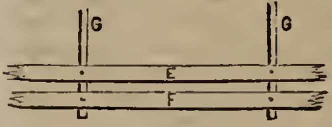
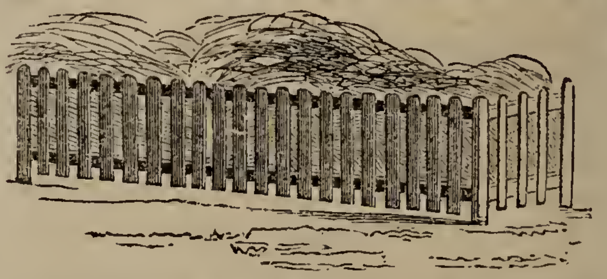


Fig. 2.



[The above is from a correspondent. We would suggest the use of the vertical bars in constructing the racks, as being always at the right height under all circumstances, as shown in fig. 3.

How to make Cheap Beef.

My stock for the last three years has consisted of good Durham grades, and I have just killed my first young bullock, aged 20½ months, and fed as follows: For the first three weeks he got the mother's milk pure; for the next four months plenty of good skimmed milk, good clover pasture and nothing else. At the first approach of winter he was taken up, *warmly housed,* and fed good hay, and 100 bushels carrots and 12 bushels oats, ground, at 20 cents. This spring he was turned out to good pasture, and got nothing else till Nov 18th, when he was fit for the butcher; but not wishing to kill him till the weather set in cold, I shut him up to the 11th inst., (Dec.) and fed him hay and meal, at which date he was slaughtered and weighed the four quarters, 688 pounds. The meat of a first rate quality and very fat. I do not state this as being anything wonderful, (though it is *here,*) but I should like to learn if any of your readers can raise cheaper beef. By this plan of killing early beef, I get rid to a great extent of one great bugbear, the long winter, as I avail myself of two whole summers to one winter, and I find it cheaper to winter calves well, than grown beasts. H. R. Forster. *Credit, C. W.*

The Art and Science of Butter-Making.

Messrs. Editors—On reading the remarks made at the Farmers' Club of Little Falls, Herkimer county, which is distinguished for its dairy husbandry, and the rules for butter-making published in the Country Gentleman of September 16, over the signature of Mr. A. B. Dickinson, I have been surprised at the small progress attained either in the art or science of this important branch of rural industry. If my memory is not at fault, it is just forty years since the writer took, in company with older members of the family, a couple of dairy cows, samples of their butter, a pair of beautiful twin heifers, and a small flock of superior Merino sheep, to a county fair held in the village of Herkimer. I was then an agricultural student, living with a gentleman in the town of Warren, whom Mr Crane spoke of when Speaker of the Assembly, as "being the best farmer he had ever known in his life." Mr. C keeps some 200 cows in the town of Warren; and the father of the writer had emigrated some years before 1818, from Warren to Chenango county, and settled on a dairy farm, which has ever since remained in the possession of the family, and been devoted to the production of butter. In 1825 I removed from Chenango to Western New-York, and soon found that the hard well and spring water of that region was altogether inferior to the soft water of Chenango for washing butter-milk out of recently churned butter. A knowledge of chemistry acquired in the study of another profession than that of agriculture, enabled me to understand the action of earthy salts dissolved in water, on the volatile oil which imparts its peculiar flavor to the butter; and also their effects on the solubility of the curd in butter-milk.

There are six substances in milk, which every dairyman ought to study as a part of his professional education. These are—1. Pure water—2 Caseum or cheese curd—3 Milk sugar, which imparts a sweet taste to whey—4. An involatile fatty matter called butter—5. An aromatic volatile oil, which may be agreeable or otherwise according to circumstances—6. Coloring matter, as shown in May and June butter.

The substances acting chemically on each other, which damage or spoil butter, when kept in firkins or otherwise, are curd sugar and water. Of these, curd being a nitrogenous compound, and not soluble in pure water, is the most difficult to remove entirely from fresh butter, and at the same time it is most prone to undergo chemical changes, and evolve the nauseous gases that give a bad smell and taste to rancid butter.

I can best point out the usual defects in working over fresh butter, by briefly reviewing the rules prescribed by Mr. Dickinson. He says:

> "As soon as the butter has come and gathered, take it immediately from the churn in its warm state, and put it in a large wooden bowl, which is the best vessel for the purpose; then put in cold *soft* water; then commence pulling the butter with a ladle, in so gentle and careful a manner as not to affect the grain—for as sure as that is injured at the washing or working, the butter becomes oily and can never be reclaimed. Every particle of milk must be washed out, and then season with the best Liverpool salt."

The above directions are equally sound in theory, plain and satisfactory. He then proceeds as follows:

> "Set the bowl away until the next day, and when sufficiently cool *work the mass thoroughly*, but not so as to affect the grain; and on the third day pack it away if it has assumed the right color."

If butter is worked sufficiently to remove "every particle of milk" before it is salted, as it certainly ought to be, how can it be otherwise than that all subsequent "thorough workings" must injure the grain of the butter, (making the mass adhesive like grease,) and removing in the brine forced out, a large share of the aroma which should remain in the butter? If it is important to "pull over" new butter, rather than crush and squeeze it, and if it is necessary that this manipulation be done in *soft* water, then all "thorough working" in brine, (which is the hardest kind of hard water) cannot fail of being very prejudicial. Let us suppose that some milk remains in the butter at the time salt is added—as directed by Mr. Dickinson, (and one working of soft butter just from the churn will not remove all the milk,) what is the chemical effect of the earthy mineral called salt, on the curd in the butter? Will Mr. D. answer this question? To aid him and others to give a correct answer, I will call their attention to the well known influence of strong brine on the fibrine of tender lean meat. Its solubility is impaired and its digestibility diminished, being transformed into a substance hard and tough like leather. After the fine particles of curd have been hardened in a mass of butter by salt, one might as well undertake to work out a handful of fine sand and clay from a bowl of butter, as all the caseum or cheese in the mass. If Mr. Dickinson had melted in the most careful manner, samples of butter prematurely salted, and those salted as directed by me, he would know that the latter contain much less curd than the former, when packed in the firkin. Fresh butter for long keeping, should always be hardened by cold water or ice, that the particles of butter may readily consolidate together before one attempts to expel the milk. From soft oily butter, the extraction of all milk is simply impracticable.

Kept in a cool place, butter needs no salt to preserve it before it is ready to be packed away. Then let it be moderately seasoned, and no brine worked out of it at all.

I entirely concur with Mr. D. in the opinion that pure soft water is required to wash all the curd and sugar of milk out of fresh butter—that to attempt to remove every particle of adhesive syrup and caseum by working new butter in butter-milk alone, in which they abound, is absurd. But as all earthy salts injure water for so delicate an office as that of cleansing the most fragrant and delicious butter—and as the purest natural water is that which drops from the clouds and percolates a short distance through pure sand, gravel, and charcoal, every dairyman should have a filter of this kind, unless nature has favored him with soft spring or well water. Compared with their value, filters and ice houses are very cheap. If the over-salting and over-working of new butter are injurious, as they certainly are, no less so is the over-washing even in the purest distilled water. Thousands work hard and long, and sadly spoil their butter for long keeping when they would have it extra nice, and utterly fail in their object. A knowledge of scientific principles is what they lack, although they neither see nor believe this important truth; and therefore they go on making frowy butter from childhood to old age, and cannot, if it were to save their lives, produce a firkin that will keep two years in a warm climate without stinking. I have watched the operations of butter making with lively interest for forty years; and if any one curious in such matters should ask how all the cows giving milk in the State of New-York in 1845, happened to be counted for the first time in the history of that great dairy commonwealth, and returned in the State Census, a correct answer could not be given without connecting my name with the investigation. Dairy cows have driven millions of sheep out of the state, and yet butter is worth about twice as much a pound now as it was 25 years ago. There is scarcely a limit to the consumption of really good butter; and I should rejoice to see its production placed on a sound and enduring basis.

That part of the subject which relates to the care and feeding of dairy stock, involving the consideration of the theories of Mr. Dickinson, I will discuss in another letter. Cato.

Winter Management of Fowls.

Among all nations of the earth eggs and poultry have long been used and highly prized as articles of food. But few animals are of so much utility as the species of fowl. Whether young, adult, old, male or female, these birds afford light and wholesome food, which is equally suited to those in good health and to those in a sick or convalescent state.

There are many who have not learned the difference there is in the richness and flavor of eggs produced by well fed hens and those from birds that have been half starved through our winters. There will be some difference in the size, but far more in the quality. The yolk of one would be large, fine colored, and of good consistence, and the albumen or white, clear and pure; while the contents of the other will be watery and meagre, as though there was not vitality and substance enough in the parent food to properly carry out and complete the work Nature had sketched. In order, therefore, to have good eggs, the fowls should be well fed, and also provided during the winter months they are unable to come to the ground, with an abundance of fine gravel, that they may be able to grind and prepare their food for digestion.

It seems ever to have been an object of great importance, in an economical point of view, to secure the laying of hens during those periods of the year when, if left to themselves, they are indisposed to deposit their eggs.

There appears to be naturally two periods of the year in which fowls lay—early in the spring and in the summer; and this fact would seem to indicate, that if left to themselves, like wild birds, they would bring forth two broods in the year. The laying of hens continues with few interruptions till the end of summer, when the natural process of moulting causes them to cease. This process, which is annual, commences about August, and continues till late in autumn. It is the approach, the duration, and the consequences of this period which puts a stop to their laying. It is a critical period for all birds. All the time it lasts, even to the time that the last feathers are replaced by new ones, till these are full grown, the wasting of the nutritive juices, prepared from the blood for the very purpose of promoting the growth, is considerable; and hence it is no wonder there should not remain enough in the body of the hen to cause her egg to grow. Old hens, therefore, cannot be depended on for eggs in winter—the very time we want them most. As pullets do not moult the first year, they commence laying at an earlier period than the older hens. It is possible, therefore, by having early broods, and by judicious and careful management, so to arrange as to have fresh eggs throughout the year.

The act of laying is not voluntary on the part of the hen, but is dependent on her age, constitution and diet. If she be aged and half-starved, lay she cannot; if she be young, healthy, and well-fed, lay she must. All that is left to her own choice is, where she shall deposit her egg, and she is sometimes so completely taken by surprise, as not to have her own way even at that.

The great art in the management of hens, in order to render them profitable, is to cause them to lay in winter, as it is the season when eggs are scarce and high. Undoubtedly much depends on circumstances, as to the productiveness of hens. Climate has great influence in this respect, and the lodging, food and care which is bestowed upon these animals, have more or less effect in promoting their fecundity.

If a person keeps a flock of hens in order to supply his family with eggs, or for the purpose of selling the eggs in market, he must manage so that they lay in winter, else they will not generally pay expenses. For in the first place he will be under the necessity of buying eggs when they are very dear, and if he wishes eggs for the market, he has them only when everybody's hens lay, and he must sell them at a low rate.

In reference to the question often asked—"why cannot hens be made to lay as well in the fall and winter, as in the spring and summer?" In reply we would say they can to a certain extent; but they require as a condition, that they be well provided with *warm* and comfortable lodging, clean apartments, plenty of food in all its variety, consisting of grain, vegetable and *animal* food, pure water, and gravel, lime, broken oyster shells, and dry ashes or mold to roll and bathe in.

Whether fowls are suffered to run at large or are confined, there should be accommodations provided for them, in the way of a house to roost and lay in. It is well known that cold benumbs fowls, and retards and diminishes their laying. Intense heat is equally bad for them. Previous therefore to getting a stock of fowls, a comfortable place should be prepared for them. The accommodations need not necessarily be expensive. In selecting a situation for this purpose, regard must be had to a *dry* and warm situation. No animal suffers more from *damp* than fowls. Hence, in order to have hens lay well in winter, it is necessary to furnish them with a warm, dry room, where the vicissitudes of the weather and storms will not reach them. Some have been so careful in this matter, and ourself among the rest, as to dig into the sides of steep banks and form rooms for them there, where they can have proper heat, and always a supply of earth for dusting. This place faces the south, with a glass front to attract the heat from the sun. The roof, in place of being covered with earth, is covered with plank tongued and grooved, and lined with boards, and the space between the rafters filled with dry tan.

Next to bodily protection, food demands attention. It is profitable, and no mistake about it, to feed hens with *animal* food in winter. In the vicinity of cities, villages, and large towns, this can always be obtained in abundance, and at low rates; warm food, such as boiled potatoes mixed with meal or bran, given *hot*, is also beneficial. If they do not lay with care and attention, give them very little cayenne pepper mixed with their warm food. Hens suffer in winter for want of exercise. They will fly from their roost, eat their breakfast, and are almost motionless, and go to roost again soon after noon, especially if they have rather a dark house, or the day cloudy and dark. We avoid this evil by scattering their grain in straw and gravel, and let them *scratch*—their natural propensity—for a living. This is the best remedy for laziness, as that exercise which gains the food, gives a good relish for it. C. N. Bement. *Springside.*

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Eds. Co. Gent.—You seemed so well pleased with a recipe or two from a lady correspondent, that my wife sends the following:

Graham Bread.

One quart of milk; scald one-half of it and pour on one quart of good Graham flour; then add the rest of the milk warm; and flour enough to stir as thick as possible with a spoon, adding half a cup of good molasses while stirring it—then bake *slowly* for an hour.

Another.—Two tea-cups of sweet milk, two of sour milk, half a cup of molasses, one tea-spoonful of soda, Graham flour enough to make a *thick* batter—bake slowly an hour.

This makes the better bread of the two recipes, in the opinion of the generality of people.

Graham flour to be good should be made of the best white winter wheat, and great care should be taken by the miller that it be not ground too fine. It spoils it to be ground fine; the bread does not rise well.

Curing Hams.

To every 100 lbs. meat, take 7 lbs. salt, 2 ounces saltpetre, 1 ounce cayenne pepper, 5 lbs. brown sugar, (or 2 quarts molasses.) In packing the hams, use one-half the salt. The rest of the salt with the other ingredients, should be put in water enough to cover the meat; boil and skim, but let it stand until cool—then pour it over the hams. Let them remain in this brine six weeks, then rinse and smoke. This recipe gives universal satisfaction.

Corned Beef.

To 100 lbs. meat, take 8 lbs. salt, 2 ounces saltpetre, 2 ounces pearlash, 1½ ounce cayenne pepper, 2 lbs. sugar (or 1 quart molasses) Directions the same as the preceding. Beef cured in this way will keep through the summer, and will not get too salty. This pickle will also do for hams.

There is another way of curing beef that is preferred by many: Pack the beef with 2 lbs. salt to the 100 lbs. meat, in tight boxes or barrels; let it remain two or three days for the salt to absorb the blood from the meat; then take it out, wash it clean, and pack with 7 lbs. salt to the 100 lbs. of beef, and 2 ounces saltpetre, in good barrels. Beef cured in this way will keep in the summer on a sea voyage. The meat is rendered harder, however, and not so sweet as when cured according to the previous recipe.

Mrs. N. would have written these herself, but I had leisure to write, while she was playing on the "big wheel," an accomplishment understood by but few women of her age (28) now-a-days. If the wives of our young farmers understood this art, their husbands and children would thank them, especially in the winter. Factory hose and mittens will not compare very favorably with good "home made" ones; and if we have these our wives have to make them, as they can seldom be bought at the shops. D. A. A. NICHOLS.

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Experiments with Wheat and Corn.

MESSRS EDITORS—In reading your valuable paper I have often been much interested in the results of agricultural experiments made by your correspondents in various sections, but rarely see any from Long-Island, and I confess I feel some delicacy in giving your numerous readers, scattered over the fertile fields of the west, the result of some of my experiments on this sea-girt isle, where a quantity of manure must be used, almost alarming to a western farmer.

Nevertheless, as you have as anxious and earnest readers here as anywhere, I take the liberty of sending the result of two experiments made this year with Indian corn and wheat.

The soil is of a sandy loam, in which the sand greatly predominates; sub-soil of yellow sand.

The corn was of the large eight-rowed white variety, which I deem the best suited to this section. It was planted four feet apart each way, and worked out twice with Langdon's horse-hoe, leaving the ground nearly level, and followed each time by the hand hoe.

The field was divided into four parts, and manured as follows, viz:

No. 1—Forty wagon loads of coarse barn-yard manure to the acre, plowed under, and 300 lbs. Peruvian Guano in the hill—yield one basket of ears to 16 hills.

No 2—500 lbs. Peruvian Guano to the acre, plowed under, and one pint of leached wood ashes in each hill—yield one basket of ears to 16 hills.

No. 3—500 lbs. Peruvian Guano to the acre, plowed under, and one quart of coal ashes in each hill—yield one basket of ears to 17 hills.

No. 4—500 lbs. Peruvian Guano to the acre, plowed under, and 300 lbs. in the hill—yield one basket of ears to 17 hills.

Yield of the field of six acres, 190 bushels of ears to the acre.

I last year obtained some Soules and Bluestem Wheat from Michigan, for the purpose of testing the efficacy of your oft repeated advice, to procure grain for seed which is raised upon different soil, and in a different climate from that where it is to be sown. I sowed it in the last week in September. The Soules proved a failure, and seems not to be suited to this section. Though sown under favorable circumstances, it was late in ripening, of poor quality, and was very much injured by the weevil—and in short, was not more than half a crop.

With the Blue stem I succeeded admirably. It not only yielded a third more than the Mediterranean, but finer wheat never grew in this or any other section.

A sample of the wheat, and of flour made from the wheat, was exhibited at the Queens County Agricultural Fair, and each took the first premium.

Nearly the whole of my crop was sown in this vicinity in September last. GEO. R. UNDERHILL. *Matinecock, Long-Island, Dec.* 31.

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Gross and Net Weight of Swine.

EDS COUNTRY GENTLEMAN—I rode up to McLean to witness a "Hog Killing Festival" that our Groton friends ushered in the new year with—and after tendering to you and the readers of the "COUNTRY GENTLEMAN," the compliments of the season, I will give you the weight of the five largest hogs slaughtered, to test the rule of estimating the net weight of a hog by deducting one-fifth of the gross weight, as per "Tribune," published in last week's Gentleman—thus:

First—A hog fattened by E Per Lee—age 2 years & 8 months—live weight 879 pounds—dressed weight 751 pounds. The "Tribune's" rule makes this hog weigh 703 pounds.

Second—John P. Hart's, 2 years and 1 month old—ive weight 740 pounds—dressed weight 629 pounds. The rule makes this hog weigh 592 pounds.

Third—D. W. Woodbury's, 1 year and 8 months old—live weight 741 pounds—dressed weight 634 pounds. The rule makes this hog weigh 593 pounds.

Fourth—L Townley's, 1 year and 9 months old—live weight 740 pounds—dressed weight 629 pounds. The rule makes this hog's weight 592 pounds.

Fifth—Lewis Ogden's, 1 year and 9 months old——live weight not ascertained—dressed weight 644 pounds.

It will be noticed that the "Tribune's" rule gives the net weight about six per cent below the *real net weight*. If this rule is used in practice, sellers should add six per cent to the amount indicated by the rule, until corrected again by a larger number of results. The result of small hogs may vary from the above. Will farmers furnish results till a standard rule can be established? E. CORNELL. "*Forest Park*," *Ithaca, Jan.* 1, 1859.

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Bread without Yeast or Milk.

MESSRS. EDITORS—I send you the following directions for making excellent, light, sweet bread, without yeast, salt, milk, saleratus, or soda—with nothing, in fact, save water and flour:

Take boiling water; let it stand until the temperature is reduced below the scalding point; then stir in flour as thick as you can well beat it with a spoon. Set it in warm water kept at proper temperature, to promote fermentation, which will usually be completed in from three to four hours. If it should become thin after standing a while, stir in a tea-spoonful or two of flour, beating it occasionally until it commences to rise. When light, put it with the flour, mixing up with water and kneading thoroughly; then make into loaves, and put on tins to rise, keeping warm, and bake as usual. After several years' experience in making bread according to the above directions, I prefer this method to any other with which I am acquainted. ELSIE M. EMERY. *Cardington, Ohio.*

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A MAN who has a fixed purpose to which he devotes his powers, is invulnerable. Like the rock in the sea, it splits the troubles of life, and they eddy round him in idle foam.

Barley in Western and Central New-York.

Barley even before the advent of the wheat-midge, was considerably cultivated in Central and Western New-York, but for several years past it has been the leading grain crop grown for sale in place of wheat, and depended upon largely by the farmer for obtaining ready money. Some years it has been largely profitable, giving from 50 to 100 per cent. return for the capital employed; but for the last two or three years the product has generally been much less, and, for some cause, largely deteriorated. All the causes of this decline in product are not known. We shall attempt to indicate some of those which influence to this result, and give our views in relation to the changes in farming made prudent by this partial failure.

Barley is an exhausting crop—a fact not sufficiently regarded in its culture, and one great reason for its small yield in many instances. It cannot be grown profitably on poor soils, on light soils, or even on good soils for more than a year or two at a time, without deterioration. This was forcibly brought out at the Evening Discussions at the last State Fair, and conversation with many practical farmers since that time, has confirmed us in the belief that barley growing has been *run too hard* by a great majority of those engaged in it, particularly in the section to which our remarks refer.

Particular attention to the soil and culture are needed by the barley crop. It requires our best soils, and they must be well drained and finely cultivated. Drained, that they may not suffer from wet or drouth, and in fine tilth, that the rapid growth of this plant may be well supplied with the elements required. Even then, unless the season is peculiarly favorable, we do not seem certain of a large crop. Both wet and heat affect it to a considerable extent—some attribute the failure to form heads, observed in some cases even on good soils, to the latter cause. Early sowing is requisite, and yet many growers fear to sow early because it exposes the crop still more to the midge.

Insects have had considerable effect in producing the decline in the product of the barley crop. It has been known for some time that a sort of maggot was sometimes found in the straw, changing its character and destroying its value, as well as causing a large decrease in grain. An entomological writer declares it to be a species of *Cecidomyia*—resembling in some respects the *Cecidomyia Tritici*, or wheat midge. Farmers have thought it the identical midge, which finding no wheat for attack, commenced ravaging the barley fields. Further light is required on the subject, and we hope to be able to communicate the same through our columns hereafter.

Over cropping, careless culture, late sowing, unfavorable seasons, and the attacks of insects, have all had their influence; but it still seems difficult to account for the decrease in product observable in many instances where no difference of condition, season, or culture, can be remembered. Not only is there a considerable falling off in bushels per acre, but in weight and quality of grain, in the character and the value of the straw, and in the whole crop—it appears less handsomely, yields less productively, and pays far less profitably than heretofore.

What course then shall farmers pursue? They do not wish to devote their labor to an unremunerative crop. We have only room to propose a few questions for their consideration.

It is said that Winter Barley, which we have not taken into account in the preceding remarks, still proves productive, subject only to winter killing rather more than wheat, and requiring equally good soil and cultivation. Why not then sow winter wheat, which is found with proper care—as much care as would be required for winter barley—to prove equally as remunerative?

Which crop will be likely to prove most profitable on any given soil, fit for either crop, Indian corn or barley? In considering this, we would take into consideration the influence upon the soil and after crops, and the value of the entire product for sale and use upon the farm.

On a soil deemed uncertain for a good crop of barley or corn, why not sow oats, giving them as good tillage and as early sowing as we would the barley crop? The yield of oats would be pretty certain to be two or three times as many bushels as that of barley, and the straw would be of much greater value for all purposes.

Why plow and cultivate at all any more land than we can farm thoroughly? Are not dairying, stock and wool growing, about as profitable as any branch of farming now pursued in Central and Western New-York?

We invite our farming friends to a free discussion of these topics in succeeding numbers of the COUNTRY GENTLEMAN.

An Experiment in Draining.

When we witness the change of a sterile soil into a fertile one through the influence of draining, it is conclusive evidence of the value of labor so applied. Such has recently come under our notice, and we shall recall it for our readers.

It not unfrequently happens in hilly or gently undulating districts, that intervals and damp springy soils abound, requiring draining before it can be brought into profitable cultivation. The instance in question, was a field of fair surface, quite free from stone, but receiving from more elevated land a continual supply of clear, cold, soft spring water, which ran over nearly the whole surface. The owner, faithless of reclaiming the lot, was yet desirous of collecting the water to supply a reservoir for cattle. This was mainly accomplished by cutting a drain across the slope of land near the upper side of the field, for about a hundred rods in length, which did so much for draining the surface that other ditches were cut completing the work. The drains were finished with the flat stone usual in such districts, carefully laid and covered with a good coat of straw, before replacing the dirt. Now of the change produced.

A crop never grew upon this lot from the time it was cleared until after it was drained. Water grasses and weeds were the only product; but since draining, it has produced annually over two tons of good hay per acre, without any manure. The appearance of the soil is wholly changed, from a tenacious blue clay, adhering to one's boots like tar—it has become a clear, black, clay loam—just such a soil as always produces remunerative crops to the farmer.

Willard's Root-Cutter.

On page 269 of the last volume of the Country Gentleman, we gave an accurate figure of this machine. The machine was furnished by George Campbell of West Westminster, Vt., and is sold by Ruggles & Co., Boston. We have since given it a fair practical trial, and find it very efficient. It will cut a bushel of roots in a minute; and a half bushel if worked quite slowly with the strength of a boy. It slices up the roots into shavings about three-fourths of an inch wide and half as thick, the principal wheel being a cast-iron plate set with small curved blades which do the work, the plate operating at the same time as a fly-wheel. It is evidently a great saver of labor, especially so to the animals which have to do the chewing.

Meetings of Ag. Societies.

Albany Co. Ag. Society.—The annual meeting was held at the City Hall in this city, on the 12th of Jan.—the President in the chair. The annual report of the Secretary, was read, accepted, and ordered filed. The Treasurer made a verbal report, when on motion his books were referred to a committee consisting of L. G. Ten Eyck, E. H. Ireland, and Robert Harper. On motion of Judge Hilton, a resolution was adopted, recommending that the next State Fair be located at Albany, and a committee, consisting of Messrs. Joseph Hilton, R. H. Pease, R. M. Griffin, J. W. Jolley, E. H. Ireland, and the President and Secretary, was appointed to confer with our citizens and the State Ag Society on the subject. An election for officers then took place, which resulted as follows:

President—William Hurst, Albany.
Vice-President—Richard Kimmey, Bethlehem.
Secretary—J. C. Cuyler, Albany.
Treasurer—Horace L. Emery, Albany.
Directors—John Cutler, Albany, and Joseph Hilton, New Scotland.

During the year the receipts from all sources, were $3,916.98, and the disbursements $3,456.70—leaving a balance of $460.28.

Art. 9 of the by-laws was then so amended as to require all bills to be audited by the Board of Managers before being paid by the Treasurer.

Vermont State Ag. Society.—At the annual meeting, held at Middlebury Jan. 5, the following officers were elected:

President—E. B. Chase, Lyndon.
Vice-Presidents—Edwin Hammond, J. W. Colburne, H. H. Baxter, Henry Keyes.
Treasurer—D. Seymour.
Secretary—Charles Cumings.
Directors—F. Holbrook, J. W. Vail, H. S. Morse, John Gregory, U. H. Penniman, J. Jackson, D. R. Potter, D. Needham, D. A. Benedict, and Elijah Cleveland.

Mr. Needham of Hartford, presented the following resolution, which was unanimously adopted:

That the Bill known as the "Morrill Land Bill," has the hearty approval of this Society, and that it is due to the great cause of Agriculture, that the passage of the Bill should be secured.

The Treasurer's report exhibited a balance of $3,361 in the Treasury.

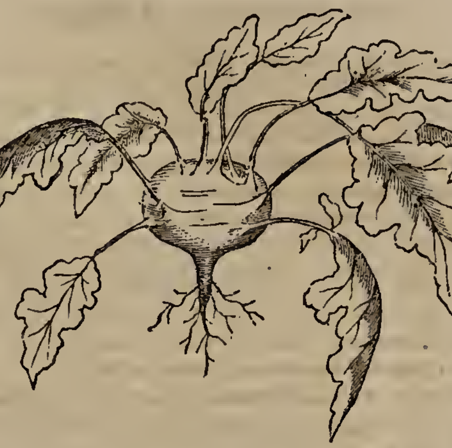
David Hill, Nathan Cushing, and Geo. T. Hodges, were elected Honorary Members of the Society.

Connecticut State Ag. Society.—The annual meeting of this body was held Jan. 12, and resulted in the choice of the following officers:

President—Ephraim H. Hyde, 2d, Stafford.
Vice-Presidents—J. P. Barstow, Norwich, and Robbins Battell, Norfolk.
Corresponding Secretary—Henry A. Dyer, Hartford.
Recording Secretary—T. S. Gold, West Cornwall.
Treasurer—F. A. Brown, Hartford.
Chemist—Prof. S. W. Johnson, New Haven.
County Directors—Horace Williams, Hartford Co.; W. Webb, New Haven Co.; James A. Bill, New London Co.; J. Gould, Fairfield Co.; Peleg C. Child, Windham Co.; Abijah Catlin, Litchfield Co.; W. G. Buell, Middlesex Co.; R. B. Chamberlin, Tolland Co.

☞ The annual meeting of the Philadelphia Society for Promoting Agriculture, was held Jan. 5th, when the following persons were elected officers for the ensuing year:

President—Craig Biddle.
Vice-Presidents—A. T. Newbold, C. W. Harrison.
Treasurer—George Blight.
Corresponding Secretary—S. G. Fisher.
Recording Secretary—A. L. Kennedy.
Librarian—J. McGowan.
Assistant Recording Secretary—P. R. Freas.
Executive Committee—John Lardner, Sam'l Williams, D. Landreth, A. T. Newbold, John S. Haines, Craig Biddle.
Library Committee—David Landreth, Craig Biddle, George Blight.



Kohl Rabi.

This plant, the seeds of which have been somewhat extensively distributed from the Patent Office, promises, if we mistake not, to assume a prominent position among the products of the vegetable garden.

The plant resembles the Ruta Baga in its leaves, below which, and above ground from two to four inches, it forms a bulb like the common English turnip. From the bulb down to the fibres, in the earth, the stem is comparatively small and tough. The bulb is the portion used as food, of course, and is cooked and served up like the turnip. In taste, it ranks between the cabbage and cauliflower.

Like all garden vegetables, it is best when very tender, and to make it so, it should have a rapid growth. It may be started in a hot-bed in April, transplanted in May into a quick, rich soil, and be brought to the table in June or early in July. In after culture, the most it requires is to have the ground kept clean from weeds. In June the autumn supply may be sown, or very probably they will succeed if sown in July. As we raised our first crop last season, we cannot yet speak of its qualities as a winter vegetable, though it promises fair.

It gives us pleasure to record whatever of good results in the distribution of seeds from the Patent Office, and we cheerfully note the above from among many exceptions, for when we receive a bundle, the duplicates of seeds which we and our neighbors have raised as long as we have planted and gathered, we cannot think that government is doing the State much service by lumbering the mail with what we can readily obtain at home. But perhaps some one is benefitted. If so, we are glad of it. W. Bacon. *Richmond.*

For the use of the cut at the head of this article, we are indebted to O. Judd, Esq., Ed. *Americaa Agriculturist.*

To make Apple Jelly.

Messrs. Editors—Not having seen this in print, I thought I would send it to you for the good of all wishing it.

Peel and core the apples—Spitzenbergs are best—put them in a brass or porcelain kettle, with water sufficient to stew them without burning. When soft press out the juice through a woolen cloth. To one quart of juice add one lemon, and boil ten minutes; then put in one quart of sugar—let it boil until it is thick enough—(you can tell by cooling a little)—then strain through the woolen cloth again, and it is done. E. S. B. *Burnt Hills.*

Drying Pumpkins.

Eds. Co. Gent.—I thought it might be beneficial to the readers of your paper, to give you my way of drying pumpkin.

Peel and cut as for stewing—then slice very thin—(it can be done with a cabbage slicer)—then spread on tins or other driers, and put in the stove oven with a moderate heat. It will retain its natural flavor better than any way I ever tried. In preparing it for pies, soak it in water a few hours, and stew in the same water. E. S. B. *Burnt Hills.*

Grain-Raker.—Where can I purchase one of the "Grain-Binder's Wheel Rakes," illustrated on page 337 of the Register of Rural Affairs for 1857? What is the price? Edward Aborn. *South Seekonk, Mass.* [Will some of our readers please answer?]

The Destruction of Weeds.

Live-Forever, Canada Thistles, Quack Grass, and Perennial Vegetation Generally.

EDS. CO. GENT.—Your correspondent, D. D. Meeker, in your paper of Dec. 16th, inquires on the above subject I have never contended with live-forever, beyond its presence in my garden. It seems to me, however, that the question of its destruction does not demand any specific experience. Nearly the same questions and answers are applicable to elders, Canada thistles, dock, burdock, &c.

1. I could detail numerous cases where dock, Canada thistles and elders, have been destroyed by *covering* with boards, barks, &c. No plant can grow without air and light. Covering very much excludes both.

2. *Plowing.*—Canada thistles have been destroyed in one summer, by six plowings in the months of June, July and August. This certainly is expensive—yet in a badly infected field of good soil, and where agriculture is highly profitable, it may be better to do so than lose the use of the land entirely.

3. *Cutting.*—This may be done with the hoe or scythe. Herbage kept down by constantly being cut off, must eventually die. In case of the borders of a field grown up to elders, briars, golden rods, &c., the very best way, I think, is to cut them all off close in the spring and remove the stones, and also make the surface even. The use of the scythe once in two or three weeks for one summer, will, with great certainly and tolerable cheapness, destroy them. So also, cutting almost any vegetable off in the height of its growth, say when in flower, will often utterly destroy by one operation. This result is especially made more sure, if soon after the cutting rain should fall to fill the hollow stalks, and be followed by hot sun. I have, myself, thus destroyed cases of Canada thistles by one mowing.

But if you wait till the plant is nearly ripe, when of course the root has been strengthened, you will fail. All persons who have dug about elders, golden rods, briars, &c., late in the season, must have observed buds set just beneath the soil. When this is the case, cutting off the old plant does no good. The energy concentrated about the root will send up a vigorous shoot the next year. I have known elders, growing in the grass of a door-yard, spring up the second spring, after having been faithfully cut off during a whole summer. But the growth last noticed was very feeble, and was checked by once more cutting them off.

4. *Culture.*—The worst piece of quack I ever saw I destroyed in one summer, by cultivating a hoed crop among it. Potatoes have been recommended for this purpose, but I think unwisely, as they are injured by late culture, such as would often be found needful to finish the thistles. I prefer corn, bush beans and cabbage, with all of which I have been successful, and that without much cost beyond ordinary culture. The precaution should be taken to plant your hill in a spot made clear at the time—then you can hoe the more boldly. It is further necessary that you should hoe in dry hot weather. Hence this plan fails in a wet season. After the first hoeing of a quacky crop, it is often well to go over it lightly in the middle of a hot day, just skimming the surface of the soil, and cutting off the young grass I have seen during the last summer, a very quacky field nearly cleaned in the following manner. It was twice plowed, (having been in barley the year before,) and thoroughly harrowed in dry weather. Then it was planted a little late to potatoes. These were subsequently plowed and cultivated pretty frequently in dry weather, except right about the hills; the destruction was nearly perfect.

5. *The use of Salt.*—This, to be effectual in the case of a large field, must be applied so liberally as to destroy not only the foul vegetation, but the crop too; and hence you cannot cultivate it Your land, too, in some cases, might be injured for the succeeding year. This method is moreover costly. Yet the limited use of salt is often advisable, as where some offensive plant is so situated as not readily to be dug out. In this case, if it be cut off smoothly, and a handful of salt be laid upon it, its destruction may be ordinarily insured.

6. *The Culture of Buckwheat.*—The sowing of successive crops of buckwheat, during the same season, in foul land, is often one of the readiest modes of clearing it. In this case the crop should be rolled down when in flower, and another crop of the same be sowed upon it. The foul vegetation will spring up with the buckwheat, but will soon be shaded and dwarfed by it. The succeeding plowing will destroy it. Thus as often as you plow you destroy a crop of weeds, &c., also, while the result of the whole operation is to deepen and mellow your soil, as well as in some sense to enrich it—not certainly by adding any mineral wealth to it, but by altering its mechanical condition, and filling it with vegetable matter. Under this general idea of the use of buckwheat, I may relate that a field near me was sown with corn in 1857, for soiling. So effectually was foul vegetation destroyed by this culture, that in renting the land myself this year, for potato culture, I found the soil very unusually clean. C. E. GOODRICH. *Utica, Dec.* 31, 1858.

How to Increase Your Supply of Manure.

" A Beginner upon a Worn-out Farm," inquired of one of our correspondents what methods and what materials he would advise him to employ in order to increase his supplies of manure, as he was persuaded that his farm, which he had just bought with a perfect knowledge that it had produced very scanty crops for several years, would require all the supplies of this kind which he could possibly "scrape together" for some years to come. Our correspondent thinking it probable that some of the readers of the *Cultivator* might be without experience in this matter of making manure heaps, as large as possible, and as much as his neighbor in need of a little help in the way of informing them, or at least reminding them, in regard to *what can be done* in this line, has sent us the substance of his talk with " A Beginner" as follows:

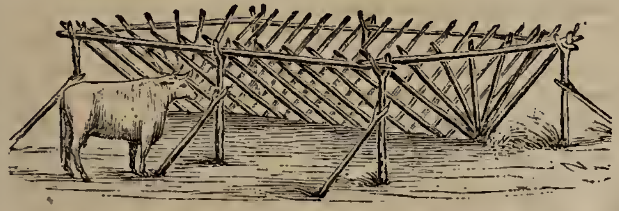
" As a comprehensive direction—one that includes every other—I advised him to collect and carry to his manure or compost heap anything and everything that ever came from the soil—everything vegetable, animal, or excrementitious which he could get hold of at a moderate cost or without too much labor. I advised him to let nothing, either vegetable or animal go to waste, not even weeds, where they could be got readily and fermented so as to destroy the vitality of the seeds, stating, however, that all animal propucts were richer than vegetable ones, as they contained a larger per centage of nitrogen, or material for the formation of ammonia. Everything that ever came out of the soil—and this includes everything whether of a vegetable or animal nature—would, I assured him, tend to enrich the soil to which it might be returned.

"Having given him this all-comprehensive and easily remembered direction, I condescended upon a few particulars. I advised him, for example, to have his stables, yards, &c., so constructed as to prevent the loss of urine, or any liquid whatever; and that he should use absorbents, as muck, sawdust, litter, mold, or any soil at hand, to take up and retain these liquids, until he should get his stables, sheds, yards, &c., so constructed as to prevent such waste as I had alluded to. This direction, which virtually amounts to this—make *the most* of your stable and barn yard manures, and do not suffer them to be wasted by rains, &c., is one whose excellence is at once acknowledged, but which is almost universally disregarded in the region of country where "A Beginner" had taken up his abode. The neglect of this direction was, indeed, one of the principal causes why the farm which he had bought, had become so exhausted that its former owner could not raise enough from it to pay his debts, and had therefore to sell and move away. And so general was this neglect in the vicinity, that it was thought a point of importance to A Beginner's success to impress it upon his mind, that one great reason why the soil he had now to manage, and the soil of many farms around him, was so poor, and why the owners of so many of them were constantly complaining of bad luck, and being too poor to do this, that or the other thing, was just this—they allowed large quantities of plant-food, which if saved and judiciously used would have produced luxuriant and abundant crops, to run off in streams from their yards and manure heaps, or to contaminate the air with odors, whose offensiveness was probably wisely designed as a warning, or as an inducement to the doing of what is needed for the prevention of this foolish waste. A man of discrimination would not be at any loss to account for poor crops and poor farmers in any district in which streams of a certain brown liquid were to be seen oozing away in a wet time, for his penetrating eye would see gold, or that which would have become gold, making its escape both in this liquid and also in a gaseous form.

" Having made, or while yet making, proper provisions to save all the fertilizing matters produced upon the farm from waste, " A Beginner" was advised to avail himself of certain fertilizing materials *outside* of the farm, which though easily to be had, are generally neglected, such as leached ashes, the refuse at tanneries, the sweepings of shoe-shops, &c. He was told that his soil and his crops would bear witness of his wisdom, if, whenever he was about to return from the village with his wagon empty, he would call at one or the other of these places, and get a load of some of these neglected fertilizers. Other hints of a similar nature were added, but for the present the foregoing may suffice."

Straw Rack.

Eds. Cult. and Co. Gent.—I send you a plan of a rack that I constructed last fall, for the purpose of feeding out my wheat straw to my cattle. The custom of farmers in this part of the country is to stack up the straw in large stacks, and in the winter turn the cattle to them; they eat out the lower part of the stack until it totters and falls; the straw is wet through by the first rain, and rots in a heap. I have known several instances where calves and sheep have been smothered by stacks falling. Last fall I had the straw off twenty acres of wheat, and, as I was scarce of fodder, built a rack like the model I send you, upon which I could stack all my straw. If you think it would be of benefit to any of your subscribers, you can lay it before them in the Cultivator. The drawing is only a section of the one I built. Mine was 60 feet long; but it may be lengthened out to any extent.



I got from the woods 16 rough forks, 6½ feet long from 4 to 6 inches in diameter. I dug 7 holes in a line, 10 feet apart, 18 inches deep; parallel with these I dug another set of holes 12 feet from and opposite the first 7, and set a fork in each of the 14 holes. I then set the two end posts opposite the center of the two rows, and 10 feet from the two end posts. I then placed poles in all of the forks, and with other forks placed against the first 14, braced the whole to prevent the weight of the straw from pressing them out. I next dug a trench about 6 inches deep through the center, and set in common fence rails, leaning the tops against the side and end poles around the whole—the rails about 6 inches apart, or sufficiently wide for the cattle to draw the straw from between them. Round poles from the woods with the bark off, would be better than rails. This completed the rack. Now put in your straw and tramp it in until the rack is filled up level, which will be a good foundation to stack your straw on, which should be stacked up until it will shed rain, and let it stand until you are ready to turn your stock to it, and it will be both food and shelter to them.

The advantages of this rack are, 1. It saves any farther handling of the straw, as it is a self-feeder—as the cattle eat out below the stack settles down. 2. It affords shelter for the cattle from rain and winds, under the rack, and good dry beds for them to lay on. 3. The braces partition the rack off so that there are places for the weak and the strong, without much danger of the weak and timid being injured or terrified by the vicious and overbearing. 4. The whole of the straw will be consumed and made into good manure, without any loss of its strength, as the waste straw will absorb all of the liquid and gases of the droppings. 5. It is cheap.

One word by way of suggestion. My rack is set east and west. The cattle stay most on the south side, and eat out that side, causing the straw to incline to fall over that way. It would be better to run it north and south; then they would eat on the east side in the morning, and the west in the evening, and keep it better balanced. D. L. Adair. *Kentucky.*

Farming in New-Jersey.

Esteemed Friends—One of my neighbors in the course of a conversation about farms yesterday, mentioned a farm of his, adjoining the one on which he lives, which is some three miles from our county town (Mt. Holly,) containing 80 acres, which he rented for $600 per annum, and had rented it for five years at that rate, and the tenant made his rent easily. He kept 18 cows, 40 sheep, 2 work horses, and 2 brood mares.

I thought it would show a little of what our Burlington county land is, but have no doubt but that a great many farms in the county rent for more than this one does. Since I have been writing, I recollect one within two miles of my own residence, of 70 acres, which the owner rents to the shares, and his share has amounted to $800 in a year, and I imagine does not *often* fall much below that.

These are not what are termed with us truck farms, but depend on grain, stock, potatoes, and fruit—this last item principally apples, with a few peach trees, perhaps. Many of our farmers fat two calves on each cow they keep, and afterwards make butter; some fat more than two to a cow, but it is, I believe, generally thought injurious to the cows to let more than two calves go to one. They are rather apt to miss having a calf the following year, if too many calves are fatted on them. Our farmers buy ewes in the autumn for, say $2 50—put them to New-Leicester, Oxfordshire, Broad-tail, or some good ram; then sell the lambs for from $3 to $5; sell the fleeces of the ewes, and then sell the ewes for about $3, toward autumn. They generally keep their calves until they weigh over 200 lbs., and sell them for 5 or 6 cents per lb., live weight—averaging, I should think, $12 each. They have to give from $1 50 to $3 for young calves; these they buy of milkmen in and near the large towns and Philadelphia. D. S. *Burlington Co., N. J.*

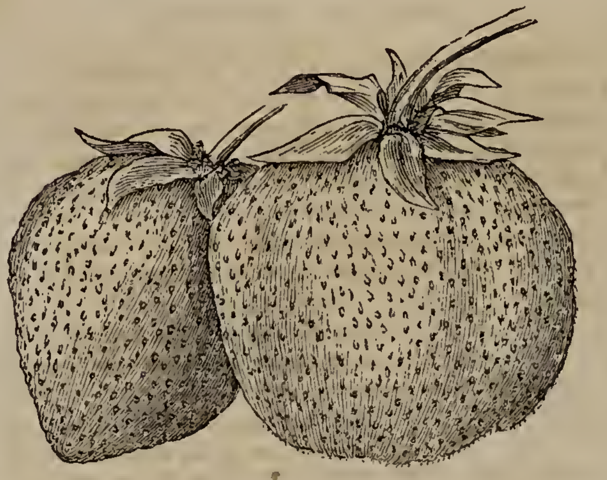
P. S. Some Indian meal is generally given to the calves, in addition to the milk they get from the cow.

Cranberries from Seed.

Eds. Co. Gent.—Your correspondent, J. Stafford of Cleveland, in a late number, (Dec. 16th) of your paper, asks whether cranberries can be raised from the seed. In addition to your own affirmative answer, let me detail my own experience on the general topic.

1. In the spring of 1851 I procured a small keg of cranberry sods from the south shore of Long-Island. They there grew in water slightly brackish. They were here set in a variety of moist soils, varying from clay to muck, and thence to sand. They all grew and prospered. But they never proved profitable, on account of the production of weeds and grass among them. I had no soil poor enough for them.

2. The same year I sowed many seeds got from western varieties purchased here in market. They were planted by drawing a slight trench in a damp, mucky soil, and filling it after the seeds were dropped, with a light colored sand. Thus I had fewer weeds spring up with the plants, and was able to mark the exact position of the rows. A fair proportion of the seed came up; but it was a long time before they appeared. The plants were readily recognized when first coming through the soil, by their bright scarlet color. The young plants are so small, and grow so slowly the first summer, that I would advise no one to attempt their cultivation who can possibly get sods. I forgot to say in the proper place, that the seeds are very small, and require to be covered very thinly. C. E. Goodrich. *Utica, Dec.* 31, 1858.



The Peabody Strawberry.

The largest specimens of this variety which we raised the past year with ordinary cultivation, were an *inch and a half in diameter*—or about four and a half inches in circumference. The figures are the exact size of specimens grown with ordinary care. The flavor is of first quality. The plants appear to be hardy, having withstood the past winter without protection. We fear, however, it may not generally prove very productive. Were it as profuse a bearer as some sorts, it would stand ahead of all, as its firmness and high flavor would fit it pre-eminently for table and market. The American Agriculturist gives a letter from a correspondent in Onondaga Co., N. Y., in which he says that of eleven plants which lived from a setting in the spring of 1857, and which he had increased to a bed 5 by 17 feet, he picked last season 14½ quarts of large delicious berries. Some were five five inches in circumference. This is a pretty large story—the produduct being at the rate of 220 bushels per acre. Generally, the experiments at the north have given far less. Another year will furnish more knowledge.

The paper above quoted tells a still larger strawberry story, namely, that the Editor obtained from a bed 6 ft. by 16, enriched with hog manure previous years and more lately with bone sawings, and planted with Longworth's Prolific, Hovey, McAvoy's Superior, Large Early Scarlet, and Burr's New Pine, over *one bushel* of large berries. This is at the rate of about *four hundred and and eighty bushels* per acre!! We do not say any mistake was made, but some cultivators think so. Some of the sorts are not eminently productive generally.

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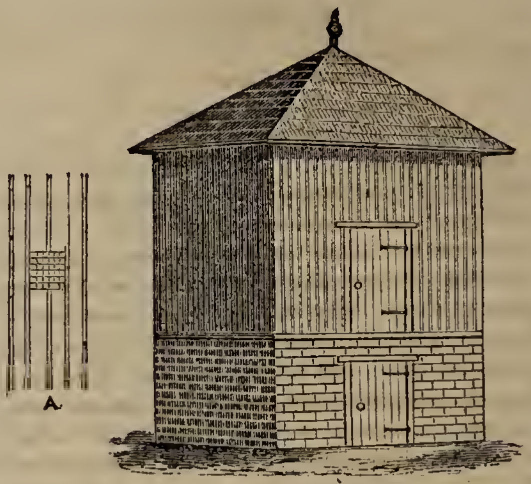
Increase in Weight of Steers.

Messrs. Editors—I purchased some small lean steers last spring, nearly three years old, weighing on the 12th of March from 750 to 870 lbs. each. I weighed again the last of October, and found they had gained from 355 to 400 lbs. each. Their feed was 4 bushels of corn and 4 do. oats, mixed and ground, and fed to each beast from the time I got them to 16th of May, with an allowance of one quart of oil-cake meal each daily. On the 16th May they went to good pasture, and fed nothing else. I don't know that the gain was anything uncommon, but I thought it good, cosidering the size of the cattle and the meal they eat. Their fodder was cornstalks and hay. The steers were of the common stock, with a little Devon blood in them. I wish other feeders would let us hear how much gain they get from the different modes of feeding Sure I am there are many poorly wintered steers that gain little in a year. John Johnston. *Near Geneva.*



Smoke-House.

Messrs. Editors—Annexed I hand you a drawing with detail of a smoke-house that I have just finished, which may present some features, which, if not new, in their combination as a whole give a cheap, substantial, safe and complete smoke-house, at the same time quite handsome in appearance.

A foundation of stone two feet wide and about three feet deep, rises above the earth one foot. The first or bottom stone projects outside of the wall four to six inches, as a security against rats working under. The brick wall of 14 inches, is 6 feet high. On this, first, joists, 2½ by 12 inches, are laid and framed together, forming a hatchway four feet square—see fig. A. The sills are 6x6, corner posts 5x5, studding 2½x3½, plate, 4x6, firmly morticed and braced. The siding is six inch pine fencing set on end, one inch thick, 12 feet long—first course three inches apart. The hip roof projects 16 inches at eaves, with a box finish of 12 inches. The door-way into the meat-room is from outside, and reached by steps resting upon a platform, which are secured to the platform by hinges, and are kept off the ground by a cord running through a pulley attached to the house corner, thus keeping out rats. The lower or fire room has a gravel floor six inches deep, grouted with hydraulic lime, preventing most effectually the possibility of rats either working up or securing a hiding place if once on the inside. The second floor is made of oak, well jointed, 1¼ by 6 inches. The hatch door is made of oak slats, 1½ by 3 inches, let into each other, leaving space of 3 inches for the smoke.

The building is 14 feet square, 19 feet to top of siding; roof 5 feet to cone; doors 3 by 5½ feet high. W. C. Anderson, Jr.

[It will be necessary to keep the water-lime coating in the ash-vault well covered with a foot or so of ashes in winter, to prevent the combined action of moisture and frost from cracking and spoiling it.]

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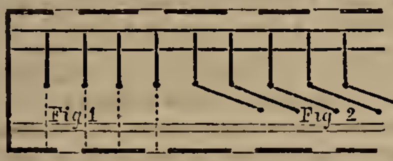
Shrivelled Wheat for Seed.—There were some things in last year's Cultivator that puzzled me; Mr. Johnston stated that shrivelled wheat produced as good a crop, and as plump; this coming from such good authority I am bound to believe it, as I have no proof to the contrary; but I think you always recommend your readers to sow the best. Last year I had some shrivelled white and some very plump. I washed out the plump and put it into a pickle of salt and water that swam an egg, and skimmed off the small grains of chess, &c., and dried it with lime. I lost money by this, and intend to sell the plump and sow the shrivelled in future. J. J. C. *Indiana.*

Cattle Stalls.

"What is the most approved method of securing cattle in stalls? P. P. Peckham. *Bradford Co., Pa.*

As we frequently meet with inquiries like this, it may be useful to some of our readers, to explain a few modes somewhat in detail.

The stalls vary in construction according to the method adopted for fastening the cattle. As a general rule, the more liberty the animal has for moving about, the more care is required for littering, and vice versa. When every animal is separated from the others, each in its stall, and by a gate, no other fastening is employed. The stalls in this case need not be more than three and a half feet wide, so that animals of ordinary size will not turn about in them; but as they may pass backward and forward, plenty of litter will be required, to maintain proper cleanliness. Where cows are large, the width should be greater. The entire length should be about 14 feet—at least two feet for the manger, 7 feet for the cow (very large will need 8 ft.,) one foot for the manure gutter, and about 3 feet for clearing away manure, passing for milking, &c. When gates are used for separating the animals, they may either extend the whole length from the manger to the rear of the stable, or what is rather better only a part of the way, the remainder being occupied with partitions between the animals. The gates all swinging one way, the outer one is opened first, and the occupant of the first stall marches out, and so on successively, till the whole stable is vacated. When they return, a reversed order is observed, the inner one being secured first, and so on. Fig. 2, represents the position of these gates when open, and Fig. 1, as shut. This is the usual way in which such gates are made to work, but a neater and much more convenient way is to have these gates run on rollers on an iron bar overhead, and the attendant standing in the feeding alley at the heads of the animals, opens and closes their gates by an iron hook on the end of a stick about the size of a rake handle, without leaving the alley. A still better way, never before published, is shown in Fig. 3, where the gates, made of three light bars, are hung by two iron rods to the scantling cross-beam overhead which separates each stall, and they are opened as already stated by the hook from the feeding alley in front of the animals, and are secured by the simple wooden latch, shown in Fig. 4. When the animals take their places, these latches are successively raised, and the gates returned to their places. A double bar forms the top of the gate, between which the suspending-rods play and are thus kept firmly to their places. They shut in between two upright studs, and are thus more firmly held to their position, and are not likely to be crowded against or broken, as in the case of hinges. Another advantage of this mode is, that any one of the gates may at any time be opened, and two or more stalls be thrown into one for a cow about to calve, or for any other purpose.



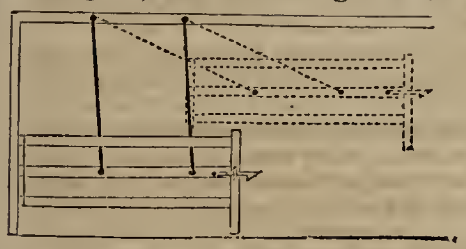


Fig. 3.

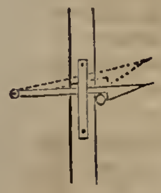


Fig. 4.

Another made of securing cows, frequently adopted, quite comfortable for the animal, but attended with some labor in fastening and loosening, is the sliding halter, shown in Fig. 5. The stake or post on which it slides is slightly inclined, to give more room in lying down, and is placed just without the manger. An iron ring or chain loop, sliding easily, encloses the stake, and a smooth chain, attached to this, passes around the neck of the animal, and is fastened by a broad-tongued hook, which is put into any link forming a proper size for the neck, and cannot come out until turned edgewise by the hand. A strap and buckle is sometimes used for the same purpose, but is less durable.

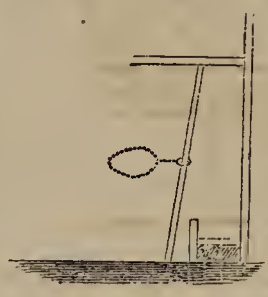


Fig. 5.

A third mode of securing the animal is by stanchions. Unlike the preceding, these prevent the animal from bending its head to its sides. Each one consists of two upright stakes or strips of plank, placed just far enough apart for the neck to move up and down freely, but not allowing the escape of the head. One of the strips is movable at the top so as to slide open wide enough to admit the head of the animal, when it is returned to its place, and secured by a pin—its upper end sliding between two bars of wood. Cows are quickly secured to their places by this contrivance, and it has one important advantage over the other modes already described, by not allowing them to step backward beyond a certain line nor to lie down on their droppings—for this reason less care is required in littering them. In a large milk establishment, where nearly a hundred cows were kept, the owner had all the movable stakes of these stanchions secured to a long rod, by which every cow was released by a single movement of the hand; and when they returned to their places and began eating their messes, a like movement fastened every one.

In all cases where cows are secured at the head, the partitions between the stalls should extend backwards from the manger about five feet, and to admit the free circulation of air, should not be more than four feet high. These partitions may be made thus: Set a post of cedar or other durable wood firmly into the ground to form the rear of the division, *a*, Fig. 6; this has a groove chisseled into it, to receive the partition plank; another groove for the other end is made in a stud at the back of manger, *b*. To prevent the decay of these plank, they should rest on curb-stone, *c*, set into the ground. The floor on which the fore feet stand, and on

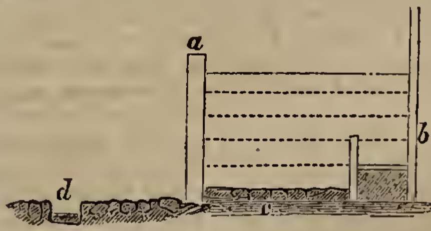


Fig. 6.

which the animals must kneel in lying down and rising, should be compact earth, well covered with straw, so as to be soft and comfortable. The hinder portion of the floor should be paved, or flagged with very thick solid flag-stones. A gutter, *d*, for the manure should be formed of smooth flag-stones, with curb-stones on each side, so that it may be just wide enough for a common square shovel to work in, and by which it may be easily and effectually cleaned. This gutter may be made of plank, but this soon decays. Stalls are often made seven feet wide, each for two animals, a stout post only being placed midway between them, Fig. 7. This has the advantage of securing more circulation of air, and of more room for cleaning.

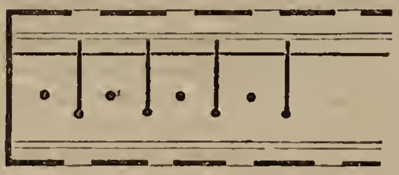


Fig. 7.

The manger should be at least two feet wide, and if intended to hold roots, meal, &c., should be a foot higher at the bottom than the animals' feet. If only for hay, it may extend down to the floor, the feeding being given in movable tubs holding each about five gallons, which have the advantage of being easily and thoroughly cleaned for each successive meal,—cattle, as well as animals of a higher order, not liking to eat from dirty vessels.

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Model Dairy Farm and Barn.

Mr. J. E. PETTIT of Fabius, N. Y., is characterized as "a pioneer in the onward march of dairying," by a correspondent of the *Saturday Evening Post*, (Philadelphia,) who furnishes that journal with an account of his operations, from which we gather the items below:

The farm was formerly carried on "under a mixed system of tillage and sheep husbandry—the major part of the farm consisting of hillsides too steep, and swamps too low for the plow." Mr. P. seeing the poor policy of tilling such a surface, determined upon fitting the farm for dairying, and it is interesting to note the means employed. By a thorough practice of ridge-plowing, under-draining and trenching, he has rendered many acres of swampy and low clay lands, highly productive of grass and roots for stock. On the more bleak and exposed ridges of the hills, after giving the soil a deep, fine pulverization, he has set an orchard, now of vigorous and hardy growth, a breastwork against the wind and sun, and retaining the snow in winter, thus preventing the winter-killing effects of frost and exposure, and yielding valuable fruit, which, aside from other purposes, is unequalled as food for cows in the production of milk. Gypsum, stable manure, and other fertilizing materials, are used with telling effect on the remaining slopes.

The barn, 60 by 80 feet in size, has a basement 10 feet deep, with a bottom of solid rock. The posts of the frame-work above, are 20 feet in height, with a roof of good proportion still higher. A bridge, the sides of which are built of quarry stone, and the intervening space, except that occupied by an ice-house, filled in with refuse cobble stones, leads up to the front door above the basement. A broad alley extends through the barn to a large door on the opposite end, where there is another bridge of slight declension, the whole width of the barn, leading to higher land in the rear. This bridge is for the passage of cows and teams—the alley for teams to pass through in hauling hay and other feed. On each side of the central alley, extending about 60 feet from the rear end, are two tiers of stanchions for cows, in front of which are rows of troughs for feeding the cows, which stand on either side, heading towards each other, with a space between for the reception of hay and fodder. Each cow along the tier occupies three feet—so there is room for eighty, the number usually kept on the place. The hay is drawn in at the center alley, and thrown overhead, where is space for two hundred tons—a supply sufficient for the winter's use.

At milking time in summer the stables are opened; in ten minutes all the cows have marched to their places, and are drinking whey from the troughs; a man fastens them there as fast as he can walk along, by closing up one side of the stanchion, which is caught and held by a drop latch. Eight milkers are employed—each cow as soon as milked is set at liberty—and in an hour's time the whole are finished, and the milk is all in a large vat in an apartment at the right of the front entrance on the same floor, where it has been received from a tube, connected with a straining pail stationed on the milking side of the division wall. When the cows are all gone, the floors are immediately cleaned with shovel, broom, and water, until every particle of the cows' droppings has disappeared through a trap-door into the basement. This, Mr. Pettit says, is his California, and the saying is comparatively true, for the liquid manure which comprises two-thirds the value of the whole, and is usually wasted, is saved by draining into a large cistern, from which it is pumped and carted away when desired. A sewer is in process of construction for conducting it down a grade for about twenty rods, where it is to be deposited in a large vat, from which it can be drawn off by a faucet into a waggon tank when needed. The solid manure may be got away in winter or summer, when most convenient. A free use of gypsum, lime, and other deodorizers, not only adds to its value, but prevents the escape of ammonia or any nauseous stench into the air or other parts of the building.

The apartment mentioned above as receiving the milk, is some 15 by 25 feet in size, and is the "work room" in which the cheese is made. The great milk vat, for convenience, is run off to the center of the room on a railroad track. In one corner is a steam boiler, which is connected by a pipe with a chamber in the milk vat, where the steam is thrown to heat to any required degree for warming milk or cooking curd; a pipe also passes from the boiler through an aperture in the wall, to a tub for cooking roots and other feed.

Under this room, and of the same dimensions, is a room for the storage of roots, apples, and other feed which will not bear much frost. Water is brought here from a pure spring in the rear of the building, where it can be drawn with a faucet for washing roots; from this point pipes diverge, carrying it to almost every part of the building—one leads to the boiler, one to the sink for washing dairy utensils, another to a tub for wetting and mixing feed, another to a vat for watering cows, washing floors, &c., and still another follows along the chimney to the roof, to be used in case of fire. A room in the basement contains a cistern for the reception of whey, to which it is carried in a pipe from the vat where the cheese is made, and from which it is pumped daily for the cows.

The whole work of cheese making is performed in the building—the cheese curing house is situated a short distance away in an orchard. The whole routine is characterized by neatness and order, and the product is held in high estimation wherever known.

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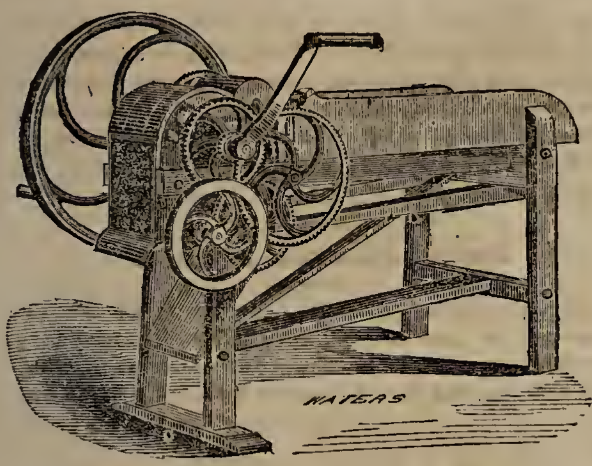
REMEMBER.—Five dollars will pay for three copies of the COUNTRY GENTLEMAN one year, or for one copy three years, if sent strictly in advance.



Hickok's Stalk Cutter and Grinder.

We present above an engraving of this cutter, of which the following is a hastily written description. It is quite similar in its cutting arrangement, to the long and well-known Sinclair stalk cutter, being connected with a heavy shaft crosswise the feeding hopper, on which are fixed heads or arms at each side of the mouth, and on these heads or arms are bolted four knives, which are of cylindrical form, corresponding to the whole diameter of the cylinder. The knives are so formed as to present a spiral edge, and in revolving they produce a shears cut against a dead knife at the mouth of the hopper. On either end of this shaft is fixed a crank and balance-wheel, and the latter being flat, answers for the band pulley when driven by horse power. There is a a pair of feeding rollers, driven by geers—the rollers being flexible to accommodate themselves to a large or small amount in the hopper.

In addition to this, and which forms the most novel feature in the whole, Mr. Hickok has combined a pair of his well known cider-mill grating cylinders, which receive the mass as it falls from the knives, and passing between these rollers, it becomes finely pulverized or ground all at one and the same operation. This combination of the grater promises to become a desirable acquisition. Like most new machines, we are informed that this has in some parts not proved sufficiently substantial to withstand the hard use when driven by horse power; but this defect will of course be remedied, if it has not already been, and the machine although manufactured for use by hand, will of course accomplish still more by the application of higher power. It is pretty hard work for one man to turn, but if furnished with a double crank, two men would have no difficulty in operating it all day.

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Corn-Huskers.

A truly valuable corn-husker is yet to be invented. We have recently made a trial of the one which received the first premium at the State Fair at Syracuse, doing the work personally, so as to be sure of accuracy, and using a watch as a test of time. Placing the stalks upon a barn floor, we found no material difference between the work of the machine and that of the fingers; either, by activity, would husk about five bushels of ears an hour, of the common eight-rowed yellow corn. By the machine, however, (which separates the cob with a stroke of a knife, and shoots the ear out sidewise,) the corn was scattered over the floor, and the stalks from which it was cut, were left in a confused heap. Portions of the ear were likewise occasionally left attached to the stalk, as it is difficult to hit the exact point of separation. Placed upon the earth instead of upon a floor, the operation of the machine would not be quite so satisfactory. We tried the experiment of first jerking the ears unhusked from the stalks and afterwards using the machine, but lost time on the whole, although each could be done with more expedition separately. There are some who are unskillful in husking with the hands, who doubtless would do more by the assistance of the machine; and there are others again, possessing much manual skill, who would work more rapidly without it, much time being lost in placing each ear separately in its place for the blow of the knife. A corn-husking machine of the right sort, must be either held in the hand, so as to be instantly applied to each ear, or else the husking must be done by horse-power in a wholesale manner, without the care and labor of handling every ear separately.

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Chinese Sugar Cane Molasses.

Eds Co Gent.—Presuming that you would like to hear of the success of any of your subscribers in any farming operations, I will send you my experience in raising Chinese Sugar Cane this year, and manufacturing the same into molasses, with a bill of the items.

Last spring I selected one and a half acres of land, (a dry sandy ridge,) which was planted to corn last year, and yielded about twenty bushels of corn per acre. I drew on to it twenty good loads of manure for one team to haul, and spread it over the ground, after which I plowed it once, and marked it off one way four feet apart, and planted the hills two and a half feet apart in the rows. I plowed it three times with a double shovel plow, and hoed it once only. It grew well, suckered much, and I allowed them all to grow.

In the fall, owing to being disappointed in getting my mill, (a two roller iron one,) I did not commence making molasses until the first of November, about which time commenced a long rainy spell, which lasted until after the middle of Dec., and as I had to work up the cane out of doors, I lost considerable by being delayed until after a number of hard frosts, and a consequent depreciation of the quantity and quality of the juice, proved as follows:

The first half acre worked up, yielded 100 gallons of molasses. The other acre also yielded 100 gallons—half as much as the first per acre, and the cane grew very evenly all over the ground. That the juice deteriorated, is proved by this: at first 16 gallons of juice made two gallons of molasses, and at last 16 gallons of juice would make no more than five quarts of molasses, but the quality of the molasses when made was unchanged, and was pronounced by all who tasted it, to be the best they ever saw—far preferable to Orleans molasses.

I am satisfied that if I had got my mill so as to have worked up the whole field in season, as I did the first half acre, I should have had about three hundred gallons, but I am very well satisfied as it is. My molasses sold readily at 60 cents per gallon. Below I give you a bill of the debt and credit:

	Cr.	Dr.
To 1½ acres of land,		$3.00
" Manure,		5 00
" plowing,		1.50
" marking,		50
" planting,		1.50
" plowing three times,		4.50
" hoeing once,		2.00
" blading, topping, and cutting,		15.00
" hauling and piling,		5.00
" grinding and boiling,		30.00
" wood—6 cords,		12.00
Total,		$80,00
By 200 gallons molasses at 60c.,	$120.00	
By cane seed, 40 bushels, at 37½c.,	15.00	
By cane leaves,	5.00	
Total,	$140.00	
Deduct,	80.00	
Balance,	$60.00	

A. A. Cole. *White Co., Ind.*

7th Ann. Meeting U. S. Ag. Society.

The United States Agricultural Society met at Washington, Jan. 12th, the President, Tench Tilghman, in the chair. After calling the roll of States to ascertain the names of delegates and members from each, Mr. T. proceeded to the delivery of his Annual Address,—referring to the change in the management of the Society when its presidency passed into his hands; to its present office in Washington, and its Monthly Bulletin; proposing that the Secretary should henceforward give his whole time to its affairs; alluding at length to the exhibition at Richmond and its results, the objects of the Society, and the publication of its Transactions; complaining that no mention is made of the U. S. Ag. Society in the Patent Office Report, where some facts are collated in regard to State and district organizations of the kind, while a lack of courtesy is thought to have been also manifested by that department in other ways; recounting the history of the Society; regretting that it has as yet received no aid from Government, although an act of incorporation is now before Congress; noticing the death of Hon. Moses Newell, one of its officers, during the year, and closing with a favorable mention of the Fund collecting for the purchase of Mount Vernon.

The Treasurer, B. B. French, then followed with his report, showing the present resources of the Society to be $2,109.41, of which only $417.41 is in his hands, the remainder being a balance due from the Virginia Central Ag. Society.

The Constitution was so amended on motion of Henry Wager of New-York, as to include on the Executive Committee of the Society, its ex-presidents for five years after their occupancy of the office. The Secretary's Report was then read. On motion of William Kelly of New-York, after some discussion, a nominating committee was appointed. It was stated in reply to an inquiry from John Jones of Delaware, that the committee appointed two years ago to memorialize Congress on the subject of an Agricultural Department, had not urged the matter, and after an extended debate upon the subject, it was finally laid on the table. On motion of H. S. Olcott, the President's Address was referred to a Committee, when the Chair announced that the subject of Agricultural Education was in order, and a series of resolutions in favor of the Morrill Land Bill having been passed, an address was listened to from Prof. Cary of Ohio, and after some further discussion, the Chair announced the standing committee on nominations, as follows:

Wm. Kelly, N. Y.; E. Holmes, Me.; F. Smyth, N. H.; E. P. Walton, Vt.; W. P. Wilson, Mass.; G. H. Penfield, Conn.; J. Jones, Del.; Gen. Kimmell, Md.; Benjamin O. Tayloe, D. C.: W. H. Spence, Va.; H. K. Burgwin, N. C.; Hon. B. Fitzpatrick, Ala.; W. L. Underwood, Ky.; F. G. Carey, Ohio; D. P. Curtis, Wis.; D. P. Halloway, Ind.; Mr. Barret, Mo.; Legrand Byington, Iowa; Mr. Brown, Nebraska; W. T. M. Arney, Kansas; Sylvester Mowrey, Arizona.

The morning of the second day was spent mainly in discussing the whereabouts of the next exhibition, the claims to which of some point in the Mississippi Valley were quite strongly advocated, and an application was presented from Peoria, Ill. Cincinnati, Pittsburgh, and Indianapolis were also suggested.

We have received no further account of the doings of the meeting, excepting that contained in a dispatch by telegraph to the New-York Herald, which states that Gen. Tilghman was re-elected President, and Messrs. French and Poore respectively Treasury and Secretary. The usual board of Vice-Presidents, including one for each State and Territory, was also chosen, together with the following members of the Executive Committee: Henry Wager of New-York; J. McGowen of Pennsylvania; J. W Ware of Virginia; F. Smyth of New-Hampshire; J. Merryman of Maryland; H. Capron of Illinois, and J. M. Cannon of Iowa.

Feeding Flax-Seed to Cattle.

Eds Co. Gent.—On page 17 of No. 1, Vol 13, Co. Gent., W. R. C. of Illinois, asks "how flax-seed may be profitably fed to stock instead of oil-meal?" I will give you the way in which I have fed it, (and also one of my ancesters, who fed it quite liberally,) which I should prefer at the price to oil-meal.

His rule was to mix one bushel of flax-seed with three bushels of oats, and get it ground; by so doing, any miller can grind it. Be particular to have it ground fine; then mix with other meal as desired, and fed to fatting stock, I should consider it very valuable.

I have fed it to calves with success, by getting fine ship-stuff and mixing with the oat and flax-seed meal in equal quantities—that is, to three of oats, one of flax-seed, and four of ship-stuff, and mixing thoroughly after the oats and flax-seed had been ground together. Perhaps some one will give a better way of preparation without the grinding. I think it a valuable feed as prepared above, for any kind of stock, including horses and sheep. Of late years I have not been able to get much of the seed in this vicinity at any price. Jonathan Talcott. *Rome, N. Y.*

Potatoes in New-Jersey.

Messrs. Editors—On page 331 of volume 12 of the Co. Gent., I notice a communication from N., of Salem county, in which he offers what he calls a sweeping assertion, "that Salem and Cumberland counties in this state, are two of the best, if not the very best in the United States, for producing that valuable esculent, (the potato,) in its perfection." A little further on he says, "as Paris means France," &c., and leaves us to fill up the comparison by supposing that Salem county means all New-Jersey. To show you that there are a few potatoes raised in other counties of New-Jersey, besides the two above mentioned, I copy from Prof. Geo. H. Cook's Report on the Geology and Agricultural Resources of the Southern Division of the State, the number of bushels of potatoes raised in those two counties, and also the number raised in Monmouth and Burlington, respectively, in the years 1840 and 1850.

	1840—No. of bush.	1850—No. of bush.
Salem, ...	70,644	248,315
Cumberland, ...	31,851	137,313
Monmouth, ...	273,280	813,849
Burlington, ...	193,126	412,143

I think it quite probable that *some* of the potatoes quoted or mentioned in the New-York Tribune as "Jersey," came from counties farther north than either Salem or Cumberland, especially when we consider that they lay nearer that market. I suppose the preference given to Jersey potatoes, is owing to the fact that marl is almost the only manure used in raising them, for it is a very common opinion that potatoes raised here from marl, are much better for eating than those we raise from heating manures. But with regard to the Peachblows, as they are a very late growing variety, and require all the season to mature, it may be that our longer season gives them an advantage in this particular; and for this reason I think it likely that they will be found to succeed first rate further south. G. H. *New-Jersey.*

Centrifugal Friction Regulator.

We have been furnished by Messrs. Emery Brothers, of the Albany Ag'l Works, with the annexed cuts and description of a new and efficient contrivance to control the velocity of Horse Powers, especially those on the endless chain principle—as well as for regulating a great variety of machinery, whether driven by Horse, Water or Wind Power.

It is necessary that such an instrument should have the attributes of regulating the velocity and being adjustable to any speed desired, and at the same time be simple in its mechanism and operation, sure in its effects, and readily applied to any machine desired. From the lack of such control over machinery serious accidents have happened, while by its aid a uniform velocity may be obtained, and in many kinds of work the services of one attendant may be dispensed with, whose business would otherwise be to attend the brake.

The invention represented in the accompanying cuts is only about six inches in diameter, complete in itself, and weighs but eight or nine pounds.

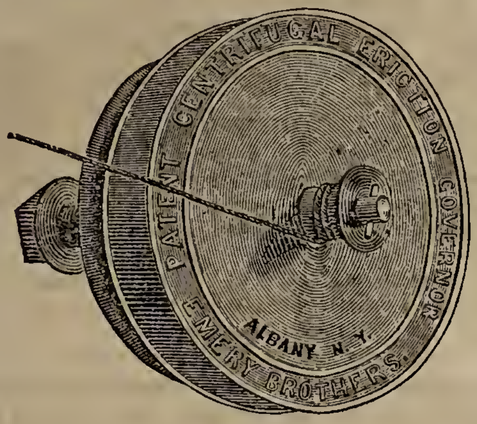


fig. 1

Fig. 1 represents the instrument complete ready for use. The cord as seen, is extended to a brake wherever desirable. In operation the cord is wound around the spindle as it is turned by the Regulator and draws upon the brake, producing the requisite friction upon the machinery. The Stem with nut and screw extending from the back serves to attach the instrument in position to anything permanent, and also extends through the whole instrument and receives a pin in its outer end to hold the several parts together. In using it on the Endless Chain Power, it is attached to its side and directly back of the band wheel.

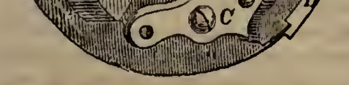


fig. 2

Fig. 2. Represents the working parts of the instrument. The stem described supports a revolving disc by means of a hub as shown at D.—Upon the back of this disc is attached a sheave or grooved pulley which is partially shown in Fig. 1.

Upon the face of this disc are hung two iron weights B. B., by their pivots C. C. The longer ends and greatest weight being one side of the pivots towards the letters B. B., while the short and lightest ends are connected by a spiral spring E., which spring by nuts and screws is adjustable to any degree of velocity required.

To put it in operation—attach a round band to some part of the machinery to be regulated, as round the main shaft of a horse power and then round the sheave of the instrument, which will give motion to the disc, which in turn carries the weights, producing in the latter a centrifugal force which causes the long and heavy ends of the weights to extend outward from their stationary position with more or less force, according to the velocity.

On noticing the weights B, B., there will be seen small wood blocks or shoes b. b.

The front plate is shown in Fig. 1, with a long hub forms a spool outside, on which the cord is attached and wound. This plate has also a flange around its outer edge which extends back nearly to the disc and when in place completely encloses the weights B. B. This front plate being free to turn on its axis revolves either way or remains stationary as the case may be.

Therefore, when the spring E. is set for any given velocity, the weights will maintain their position, but with any increase of speed beyond what is desired, the disc carrying the weghts B. B. gives them increased centrifugal force and moves them outward until the wood shoes come in contact with the inside of the flange of the front plate, and by their friction upon this flange and the front plate with its spool, it is readily turned, winding the cord and operating the brake.

As soon as this excess of velocity is reduced by the brake or the work which is being done, the weights recede from the flange, allowing the front plate to turn backward, thereby loosening the cord and brake. For further information, see advertisement in another column, of Messrs Emery Brothers, of the Albany Agricultural Works, who we learn have secured the right of the Patentee, Mr. Lee Pusey, of Delaware, for the manufacture and sale of them. The prices are from ten to twelve dollars.

Feeding and Value of Cornstalks.

Messrs. Editors—Allow me to add my testimony in favor of the value of cornstalks, and also *corn buts*, which I consider the best of the two, for milch cows. I run all my corn buts and stalks through a Macomber's Patent Cutting Machine, which I think is the best machine for cutting corn fodder by hand power, as it cuts, jams and splits the large stalks and buts into *splinters* instead of *little blocks*, so that the cows eat every part except a few hard joints and some few pieces that do not get jammed and split. I had rather cut up the buts than dig them out of the manure cellar in the spring after the pigs have worked them into as tangled a condition as old farmer Gordias did the Gordian knot.

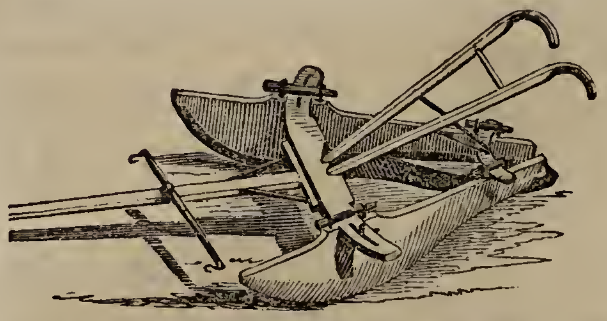
As to their value for feeding, I think they stand at the head of the list of dry fodder, that cows generally get for their *winter diet* in this part of New England, for cows, like a good many other *mammals*, do not get all the good things they deserve. One of my cows, an old farrow one that has given milk for nearly four years, gives only three quarts per day, but so rich that six quarts of it made one and a half pounds of butter, and this after she had been kept a month on cut corn buts, as much as she would eat, and one peck of turnips per day, and nothing else except what water she wanted.

My cows eat the *cut buts* greedily, while they will only strip off the leaves of those that have not been cut. A. Chandler. *Concord, N. H.*

To Destroy Live-Forever.

Editors Co. Gent.—Having twice seen in your paper the inquiry, how to kill the plant commonly known as *Live-Forever*, I give my experience. As its name indicates, it is very tenacious of life. It can hardly be dried to death. I have put branches without roots, on the top of a flat rock, in the spring, and seen the same alive in the fall. Consequently the ordinary way of hoeing it up and leaving it to die in the sun, as is common with most weeds, will not answer for this. I have tried that way to no purpose. Then, in tilling the land, I adopted the opposite plan, and took pains to draw all parts of the plant together into the bottom of some furrow or other hollow place. All served in that manner were killed. And working on this principle, in a few years the whole field was cleared of it. The labor is less than might be expected, for it does not spread all over the ground, but grows in bunches or patches, and I suppose could be disposed of quite fast, by digging it up and drawing it into some hollow, and then draw on dirt till covered a few inches deep, which would be the last of it. E. Merritt. *Pawling, N. Y.*

Late Peaches.—The Californian Farmer of Nov. 5, acknowledges the receipt of a box of peaches, from L. E. Miller of Placer county. They were from a seedling raised by Mr. M.—of a rich golden color, above medium size, a freestone, and of fine flavor.



Share's Potato Covering and Hoeing Machine,

For covering potatoes and hoeing them the first time on any kind of land. The wings contract and expand to suit any width rows, and can be set to any slant so as to work any depth desired. A piece of sheet iron passes over the rows to level them down, leaving them in a more workmanlike condition than can be done with the common hoe.

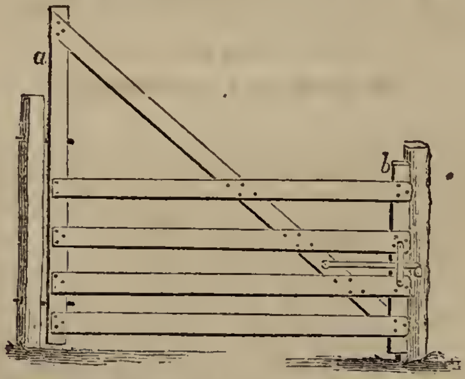
Farm Gate.

I have observed in the Country Gentleman, a variety of plans of farm gates, all possessing more or less merit, and all aiming at that most prominent one convenience. Now I look upon a farm without gates as behind the age, and would almost as soon think of building a house without a door, as attempt to manage a farm without a gate at every point where frequent passage to and from enclosures is necessary.

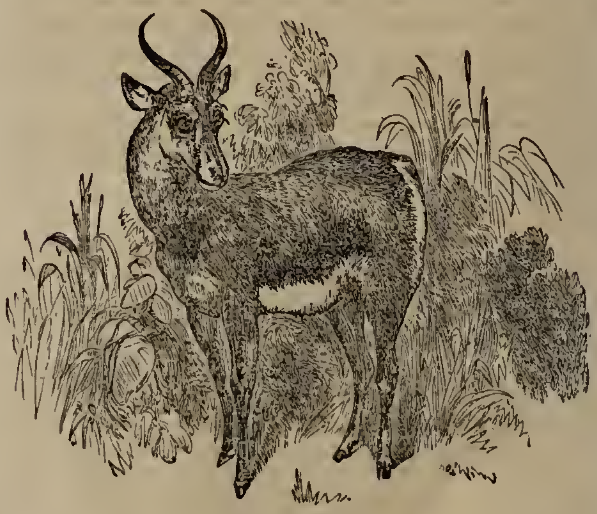
But many farmers who are intelligent on all other subjects involved in farming, appear to come to a dead halt when a gate is to be made, and employ a mechanic to plan and erect them at an unnecessary expense, many of which soon get out of order and become perfect nuisances.

The three qualities in a farm gate, where ornament is not to be a prominent feature, are convenience, cheapness and durability.

The following plan, which I have adopted on my farm, appears to me to combine these qualities. The simplicity is such that any farmer with skill enough to hold a plow can make such a gate, at an expense of not more than one dollar.



Let the farmer provide himself with two pieces of pine or poplar scantling, 3 by 3 inches, one about 12 feet long, and the other 5½ or 6 feet long, *a. b.;* lay them down on a level surface, and upon these, with 12d nails, nail the slats or bars, composed of inch pine boards, and from 6 to 10 inches wide, with such width of spaces between them as he may deem best. Then with a board 6 or 8 inches wide, make a brace extending from the top of the long post to the bottom of the short one, nailing it firmly to the long post, and to the bars where it intersects. These arrangements, as also the latch, &c, will be seen in the figure above. Then select ground posts of some durable timber, (I use black locust,) set them 3 to 3½ feet in the ground, and hang the gate as shown, with gudgeon hinges, with nut and screw at the end, (any blacksmith can make them;) incline the ground post to which the gate is hung, sufficiently to cause the gate to shut and latch by its own weight. Place a log of wood between the ground posts, fitting it closely and bedding it in the earth even with the surface, to keep the posts from *swagging* together. A gate of this kind is light and substantial, and will last for years without repairs. Farmers try one of these gates; it will cost but a trifle, and at the end of one, five or ten years, report through the "Country Gentleman" the result of your trial.
W. C. Pinkham. *Loveland, Clermont Co, O.*



The Gazelle.

Among the rare and curious animals kept at Springside, none attracts more attention than a pair of beautiful Gazelle, imported from the Island of Malta last summer They are smaller, more delicate in their limbs, more gentle and less timid than the deer. Their hoofs are cloven like the sheep; horns of the male hollow, curiously curved, annulated with prominent rings or spirals, long tapering to a sharp point, and not deciduous. In the female the horns are not so long but more delicate, straight and sharp pointed. They are of a brownish yellow on the back, and white on the belly and rump, as shown in the figure above, which we take from Wood's Natural History, published by the Messrs. Harpers. Their ears are beautiful, well placed, and terminating in a point. Its eyes are very large, dark and lustrous, and yet so meek that the oriental poets love to compare the eyes of the Gazelle to those of their mistresses. The epithet gazelle-eyed, is considered the highest compliment that a lover can pay. Its size is less than the domestic goat, which in some respects it resembles. They are from twenty to twenty-four inches in height, well and symmetrically proportioned.

"The Gazelle is for the most part more delicately formed than even the Roebuck; its hair is as short, but finer and more glossy In swiftness it equals, if not surpasses the roe, running and springing with vast bounds, and leaping with surprising elasticity. It frequently stops for a moment in the midst of its course to gaze on its pursuers, and then resumes its flight. They bound with swiftness, and are generally so shy that dogs or men vainly attempt to pursue them. With an ease and safety they traverse those precipices which to every other quadruped are quite impracticable; nor can some of them be overtaken by any animal but the winged tribe. Accordingly in those countries where the fleetest are chiefly found, they are pursued by falcons, and this singular manner of hunting forms one of the principal amusements of the higher ranks of people all over the east."

Inquiries and Answers.

[Particular attention is invited to this column, for which Inquiries on all subjects within the scope of this Journal, are solicited. While we shall continue to reply to such of them as circumstances will permit, we ask our readers to furnish any facts or experience which they may possess, in answer to the queries here proposed, whether we respond to them ourselves or not.]

Experiments with Seed-Wheat.—I had some old wheat lying in the chaff which I intended to sow, but having once sown old rye that one-tenth of the grain did not vegetate, I thought I would try a little of it in the yard. It had some weevil in it, and I put it in strong brine and skimmed off all that swam, and sowed three places with 50 grains each. In the 1st, 25; 2d, 26, and 3d, 20 seed only came up, or 71 out of 150; this was plump wheat. I had some also white, that was sown late in October, after the potatoes were dug; it rusted and was badly shrivelled; I saw no weevil in it—44 out of 50 came up, and it looks as strong and healthy as the other. I tried some old Mediterranean; I saw no weevil in it—44 grains came up out of 50. I tried some new plump white—48 grains came from 50. Now I would thank you to tell me how the weevil gets into the grain—is the egg in it, as the egg of the pea-bug in the pea? In what condition of the wheat is it most favorable for the weevil? Is it when it is taken in from the field soon after cutting, or standing long after cutting? Is there any means of preventing it from hatching when wheat is kept through the summer after it was grown? Why was there no weevil in the shrivelled white and Mediterranean? John J. Craig. *North Madison, Ia.* [If by the term *weevil* our correspondent means the wheat midge, we can briefly inform him that the fly or perfect insect lays its eggs in the ear about the time it is fully headed out or is in the *milk*—these soon hatch and destroy the grain. The mischief is generally done before cutting. Mediterranean wheat is usually exempt from its attacks. The term weevil is very indefinite, applying to a class of beetles, of which Harris says there are 4,000 described; while the wheat midge is a gnat or fly.]

Colored Fruit Engravings.—Have you got, or do you know where I can get colored engravings of fruits for nurserymen's use? What is the price of each? G. W. H. [Address D. M. Dewey, Rochester, N. Y.]

The Best Time to Sow Peas.—My practice has been, when I wished to get the greatest yield, to sow early—by the 1st of May; but when I wished them free from bugs, I have practiced later sowing, say about the 10th or 15th of June, with very good success, although at the expense of a considerably diminished yield. C. *Niagara Co, N. Y.*

Flax-seed and Oil-cake.—I would be pleased to learn of John Johnston, or any of your numerous subscribers, how flax-seed may profitably be fed stock instead of oil-cake. Located as I am, with no oil-mill within 100 miles, and no oil-cake in the market, can flax-seed, at one dollar per bushel and corn 40 cents, be fed profitably? Is there any practical method for feeding the seed whole and making it pay? W. C. R. *Ill.* [We are not prepared to answer this question very definitely. Broken or ground flax-seed has been sometimes used instead of oil-cake. As it contains much more oil than the cake, and this oil is as purging as caster-oil when separate, it is best not to feed it very largely in this way, but to mix it freely with other meal. It is considered best to soak it in water a few days. Six days will answer if in cold water, in which case there should be six tubs, one for each day successively. Two days are enough for warm water. Some who have thus experimented consider a bushel of flax-seed or fifty pounds equal to 100 lbs. of oil-cake. If this be the case, then flax-seed at one dollar per bushel would be equal to oil-cake at twenty dollars per ton, deducting however the labor of grinding and preparing it. Others have not perceived so much in favor of the flax-seed. We should much question the propriety of feeding it whole, but the experiment is easily tried, and it would be interesting to hear the result, if accurately obtained.]

Manuring Light Soils.—I like your paper first rate, and would like to see a few hints as to the best way of managing a farm composed of 30 acres of light sandy loam. As my farm is on high land, and composed of a light sandy loam, the advice about draining, using peat, muck, &c., does not reach my case, as these materials are not at my command; would that they were. I cannot satisfy myself as to what is the best way to enrich my farm; yet it must be done some how to make it pay. Am at present using the manure from one horse, six cows, three hogs, and forty fowls, mixed with half loam. O. P. W. *Plymouth, Mass.* [The application of the compost, so far as it goes, is a good one—the greater the amount of clay in the loam used for the compost the better, both because it is the best absorbent of the enriching parts of the manure, and because it tends to give strength to the soil. We would recommend as an additional means of enriching the land, the practice of plowing in frequently green crops, and especially of clover. It often happens that this proves much the cheapest made of manuring, obviating the cost of heavy cartage. The addition of some lime, ashes or marl (shell or earthy) in connection with other fertilizers will probably be useful.]

Freezing Tile.—What is the consequence, if tile when laid for under-draining should freeze solid in the earth? Would it destroy the tile or materially injure them, provided they were good hard burned tile? I have contracted for the making on my farm of one hundred thousand tile the coming season. I have Stephens' Book of the Farm, and Munn's Practical Land Drainer, but neither of them enlighten me on the subject. I will be compelled, in some localities, to place tile on account of rock, not more than two feet deep. Wm. C. Richards. [Well made tile would be uninjured if frozen, unless full of water, in which case the freezing of the water would split them. Our correspondent may have observed that pieces of pottery or stone-ware lying on the ground and frozen when wet, have been uninjured—tile, if of as good material, will remain similarly unaffected. Two feet in depth places tile beyond the reach of frost, except far to the north; the chief evil of such shallow drains, is inefficiency in draining the soil to much distance, and in a liability to become gradually filled after the lapse of many years, in consequence of the muddy surface water not being sufficiently filtered before it gets down, and hence it carries down and deposits in the tile minute portions of earth, which finally obstruct it.]

Fracture in a Calf's Leg.—Is there any remedy for a fracture of the near fore arm of a calf two years old, or must I lose it? The fracture is very near the shoulder-blade, and difficult to find. Would slinging and binding the part be a practicable method? S. P. Nicholson. *Mercer Co, N. J.* [Fracture in the limb of a calf is not of difficult cure—indeed instances are not unfrequent where they have recovered with very little treatment. If the above mentioned calf could have had the leg bound properly to its place at once, and kept there, it would doubtless soon recover—if kept displaced, its recovery will be much slower, and probably quite uncertain.]

Shade for Animals.—Mr. Dickinson stated that sheep and cattle did better without shade trees, as the "lazy rascals lay under the trees all day when they should have been feeding;" of the truth of this I am sceptical, as I find that when my sheep have no shade trees they lie in shade of fences, and I find every other person's sheep doing the same. We must have a hotter sun here, or our sheep must be different in the feeling, or Mr. Dickinson's sheep must be like the Irishman in hanging, "got used to it." Another correspondent says his cattle do better without either water or shade in the pasture;

that when they come home at night they take a good drink. If he had water in the pasture he would find the cattle would drink before night, and then too. J. J. C. *Indiana*. [A tree is a most beautiful object, and it adds greatly to the picturesque appearance of a farm to see fine shade trees scattered over it; but careful measured experiment has shown that cattle do not thrive so rapidly in summer, nor cows make so many pounds of butter, where they have the privilege of lying under the trees, where a portion at least of their time is occupied in fighting, switching and kicking flies. With sheep, the case is undoubtedly different, as they will always creep under fences when they desire, but cattle cannot.]

Ashes and Bone.—I understand that bone-dust and ashes are a good compost for potatoes, to be applied in the hill; but I do not know the proportions. Please inform me in The Cultivator, and oblige Andrew Shelton. *Newtown, Ct.* [There is no necessary connection between bone-dust and ashes, and they may be applied together or separately. Several hundred pounds of bone-dust are commonly applied per acre. There appears to be no definite rule for ashes, the quantity varying from ten to a hundred bushels or more. Both of these manures are usually of some, but not striking benefit, and often they are of no sensible advantage.]

Water Excluded by Cement.—Please inform me through The Cultivator, whether hydraulic cement will answer as well for keeping water out of a cellar or cistern, as it does for keeping it in. Last summer I built a milk-house, five feet of which was under ground, and walled up with brick, the balance above ground. In time of much rain the water rises in it over two feet; it has consequently so far proved of no value. I bought hydraulic cement last fall, but have not used it, as I was afraid it would not answer. W. R. *Fairfield, Iowa* [Hydraulic cement, if good, and with good sand, will exclude water from a cellar by plastering the walls and bottom, as well as to keep it in cisterns. It often happens that several successive coats are needed before every crack is stopped—sometimes a thick wash, applied with a brush, will close small leaks. The cellar must not be allowed to freeze, or it may crack off the coating.]

Making Tile.—What kind of earth is used for making tile? how are they burned or baked? What is the weight of a tile machine? Is it an article that requires housing, or is it so constructed as to protect itself sufficiently from the weather? L. F. D. [The same kind of earth is used that is employed for making good tough *brick*, and they are burned in the same way. A tile-machine weighs several hundred pounds, the precise weight we cannot give—it should be kept housed from the weather.]

Wheat Drills.—Can you recommend a wheat drill that will work in stumpy fields? Will drilling prevent freezing out? V. *Meadow Bluff, Va* [We know of no wheat drill that will work well unless the ground is mellow enough and broad enough between stumps to admit its free passage. Drilling, by burying the seed uniformly at a good depth, tends to prevent the young plants being thrown out on soils which heave by frost.]

Knitting Machine.—Can you inform me what a knitting machine costs, and where thay can be procured? A. M. *Belvidere, Ill.* [The only knitting machine we have examined, is Goffe's patent, and this we have not seen in operation. If we are correctly informed, it is sold by Downs & Co. of Seneca Falls, N. Y. A hand-machine for family use is sold for $35, and is claimed to knit a pair of half hose in ten minutes, or hose in 15 or 20 minutes. Those run by steam or water are more costly.]

Dioscorea Batatas.—Will you or some of your correspondents, be kind enough to inform me how to cultivate the Chinese Yam. I have now two years growth from the small tubers, and shall I continue to plant them whole, or cut them up? E. Ira Dole. *Rowley, Mass.* [Will some of our correspondents who have had full experience, please answer? On account of the labor to dig the roots from the ground, each one requiring an excavation not unlike a post-hole, we never gave sufficient attention to the culture of this plant to become familiar with the details.]

Brick and Tile Machine.—I should like to know whether a brick-making and tile-making machine, combined, is made in this country, and by whom, and for what price—the moulds only of course for brick or for tile being different. J. H. McH. [We know of no such combined machine.]

Hungarian Grass Seed.—I want to know where I can get the Hungarian grass seed, and what it will cost per bushel—and how much should be sown per acre, and at what time it should be sown. R. Hedges. *Pickaway Co., O.* [You can probably procure the seed at the seed-stores in Cincinnati, at about $2 per bushel. As to the amount of seed to be sown per acre, and the best time to sow it, we shall be glad to hear from some of our readers who have grown it.]

Grass-Seed for Lawn.—I desire to procure the seed of the *Kentucky Blue grass*, to sown a lawn shaded with native oak trees.. Can you inform me where it can be had? Or if you should know of any preferable grass for shaded lawns, I should be much obliged for the information. D. H. S. *Salem, N. C.* [In some localities, particularly at the west, the Kentucky blue grass forms a fine lawn; but in many others, its greenness does not continue sufficiently through the season. In such cases, a mixture with it of red-top, white clover, and some of the English lawn grasses may be advantageous. The Orchard grass grows uncommonly well in the shade of trees, but is too coarse for a fine lawn. We cannot speak confidently for North Carolina, but have no doubt a mixture would be better than a single sort.]

Apples.—Is the *High-Top* and *Tallman Sweeting* one and the same apple? They are cultivated here as such. Jareb Case. *Bradford Co., Pa.* [The High-Top and Tallman Sweeting are distinct varieties. The former is an upright-growing summer fruit; the latter a spreading winter sort.]

Smithsonian Institution.—Is there no way in which I could procure the "Transactions of the Smithsonian Institution," and what would be their probable cost, provided they could be got? We are informed that there has been nine volumes of "Smithsonian Contributions to Knowledge" published, yet I have never seen a single copy. If this great institution is designed to diffuse knowledge among mankind, surely there must be some way in which it can reach those that wish to receive it. H. Griffing. *Shorb, Ill.* [Will the Secretary of the Institution please answer the above?]

Peach Trees.—Will you, or some of your numerous readers, inform me through The Cultivator, how the branches of peach trees should be tied in order to bring the fruit sooner to maturity? Robert Kelso. *Wash. Co, Ill.* [We have never known the peach to be treated in this way nor for this object. The branches of some fruit trees, more particularly the pear, have been bent downwards to make them bear while young, but not to mature earlier, but this practice is now generally discarded.]

Oil for Machinery.—Will you please to inform me which is the best kind of oil to use on machinery? Is sperm oil the same as lamp oil? If not, what is the difference? C. Peck. [The best sperm oil is generally preferred, although it is said the Breckenridge lubricating oil is as good or better. Common lamp oil is more impure than the best sperm, foreign matters being thrown in to make it cheap.]

Rats.—Will not some of your correspondents who have had experience in the matter, disclose some safe and sure, or at least good way to destroy or drive away rats. A great deal is written and very properly too, to demonstrate the best methods of making the manufacture of honey profitable: might not considerable at least be said to show how to defend ourselves against the intrusion of those vermin that probably *destroy* far more for the inhabitants of the United States than the bees ever *made?* Let us have an investigation, "conducted without regard to the feelings of the rats." A. G. E. *Cardington, O.*

APPLES FOR OHIO.—Will you please give me a short list of the principal apples suited for this latitude, 39¼°, for market purposes in the various seasons. Hill lands, sandy soil, on clay subsoil, on sand-stone. Natural woods, black and white oaks, hickory, locust, white walnut, and hazel. *Jackson Co., O.* [Where the soil is good and suited to orchards, the following sorts have succeeded in the region indicated:—Rome Beauty, Prior's Red, Maiden's Blush (autumn), Fallawater, White Pippin, Yellow Bellflower, Willow Twig.]

VETCHES OR TARES.—Have vetches ever been cultivated in this country? They are highly esteemed in Ireland, and if valuable here, I thought of importing some of the seed. Will your correspondents please reply? W.

Experiences of an Octogenarian

Wheat, Corn, Barley and Potato Culture—Deep and Shallow Plowing, &c.

MESSRS. EDITORS—I saw in the Co. GENT., a call to your readers to write for you. I thought I would try my old trembling hand, to communicate some incidents that have occurred in the experience of an old farmer, who is more than four score years old.

My experience in raising winter wheat has been various. When the land was new and strong, we could raise winter wheat if sown any time before the snow beat us off, but those were the customs of by-gone days. For many years past we have made it our practice to sow our fall-wheat by the first week in September, commonly after peas, or barley. Our practice is to plow the ground once well, four or five inches deep; harrow it well; then sow the seed, two and a half bushels to the acre; then harrow it both ways and roll it with a heavy roller. In this way we get from 18 to 30 bushels of wheat per acre; but if pestiferous weeds are troublesome in the land, we think it best to summer fallow to clean the land. Our spring wheat we commonly sow after hoed crops, such as corn or potatoes, and cultivate as for winter wheat, and get about the same quantity of grain per acre.

Barley if sown after corn or potatoes, and well cultivated, in a good season, will turn out from 30 to 40, and we have got 60 bushels to the acre. Sow two and a half bushels to the acre.

Oats, treated the same as barley, will turn from 40 to 70 or 80 bushels per acre.

Potatoes planted on good sward-land, well turned over to the depth of four or five inches, and well harrowed, and planted three feet each way without manure, used to turn out before the disease came among us from 200 to 300 bushels to the acre, if well cultivated. We cut our seed so as to take 10 or 12 bushels to the acre, putting two pieces in a hill.

In 1839 we planted about 20 acres in this way, and got about 6000 bushels. You may wonder what we did with so many, as we have no regular market very near. I will tell you; as was fashionable in those days, we sold them to a distiller near by, to make whiskey of, excepting what we wanted for our own use, at 16 cents per bushel; but we made use of a good many at home, as we fatted 36 hogs and made them average over 300 lbs a piece.

With regard to the culture of Indian Corn, I should differ perhaps from many with regard to deep plowing. On my land, experience has taught me that four or five inches deep is much better than deeper. In 1853, we turned over 16 acres of meadow sward, the most of it rich and good. As our plowman was a farmer, I did not attend to him until he had plowed about one half of it, and the best of it too, when I found he had plowed it full nine inches deep. I must confess I was somewhat chagrined to see the work so done. I told him to let down his wheel and take up his traces so as not to plow more than four or five inches deep. He did so, and I must tell you we had much the best corn on the shallow plowing, though much the poorest land. The deep plowed land turned about 30 bushels of corn to the acre, when it ought to have turned 80, while the shallow plowed turned more than 50 on an average. I planted one acre of the shallow plowed and cultivated it with my own hands—planted three feet each way with six grains in each hill, on the 25th, 26th and 27th of May. My acre was eight rods by twenty, I planted a row of potatoes on every side, then planted white beans between the hills of corn.—At the first hoeing, I thinned out to four stalks in the hill, I hoed twice, and when I took off my crop you could not get your hat full of everything on the ground, excepting what was designed to grow. I got from my acre 124 bushels of ears of sound, eight-rowed yellow corn, four bushels of beans, and ten and a half bushels of potatoes. Potatoes were badly diseased that year—corn sold for 75 cents—beans for $1 50, and potatoes for 50 cents per bushel—fodder $6—so you may see the produce of my acre was $63 75. My grandson sowed spring wheat on my acre the next spring, and got 29½ bushels.

If anybody will show to me the philosophy of turning up cold and dead earth in which there is no fertility, to put our seed upon, they will show to me a new mode of reasoning. More than twenty years ago, I plowed up ten acres of pasture land for corn; a portion of it rested on lime rock, not more than three or four inches below the surface, the plow turning up all the soil down to the rock, leaving the naked rock in the bottom of the furrow for rods together; in some places there was scant soil enough to hoe the corn with, but I got a good piece of corn, yielding more than fifty bushels to the acre, without any manure. I have often traced corn-roots to a great distance horizontally, but never found them to run very deep; they occupy the warm and fertile soil in preference to the cold and dead sub-soil. For example take off five or six inches of the top of the soil on ten feet square, and plant a hill of corn in the center, and you will have a poor hill of corn, but you may put a half bushel of good dung in the hill and mix it well with the sub-soil, and you may get a good hill of corn. And this reasoning will hold good anywhere. We dont have manure to make a twenty acre lot rich two feet, or even one foot deep; if we plow deeper than the fertile parts of the soil we injure the crops, unless we have manure to make the ground rich. I speak with regard to my own land; other lands may require different cultivation.

I have been in the practice of under-draining to some extent, and have found it very beneficial on some of my land, both in drying the land and the use of the water in my barn-yards.

I have done but little in the nursery or horticultural business, more than for my own use. In the fall of 1846 I planted about three rods square of land with Apple and Pear seeds. I have sold hundreds of trees from it, besides setting out an orchard for myself, which is now bearing finely.

I don't understand the mysteries of bee-keeping, but I have kept bees more than forty years in succession from the same stocks, and have not had them run out, realizing quite an amount of profits from them, though seldom ever wintering more than ten or twelve stocks. You may call this good luck if you please; and I have had always the good luck *never to have chess among my wheat, except when I have sowed it.* OLIVER BABCOCK. *Babcock Hill, N. Y.*

Notes for the Month.

A FINE HORTICULTURAL PRESENT FOR NEW YEAR.—We are indebted to the extensive conservatories of the Manor House,—through the hands of Gen. VAN RENSSELAER himself—for a fine lot of Lettuce and Asparagus during the Holiday week. We hope ere long to make our readers participants in the pleasure arising from the admirable Horticultural improvements into which our Patroon has entered with such spirit for a few years past, by giving an account of them in the Co. GENT. as soon as time will possibly permit. They are entitled to rank among the best in the country, and we have the evidence of our own recent experience to support us in all we can say of the perfection and abundance of their productions.

AGRICULTURAL MEETING AT WASHINGTON CITY—An Agricultural Convention, consisting of gentlemen specially invited by the Commissioner of the Patent Office, commenced its session in the Patent Office Building, Washington city, on the 4th of Jan. The meeting was organized by calling MARSHALL P. WILDER to the chair, and appointing B. PERLEY MOORE, Secretary. There were 44 persons present, representing 19 States and 4 Territories. The Agricultural interests of the State of New-York were represented by Wm. Lawton, Esq., Col. C. C. Morrell, and Rev. A. Brown. After some discussion, the meeting decided that it should hereafter be designated as "*The Advisory Board of Agriculture of the Patent Office.*"

We had expected a full account of the proceedings of this meeting, from a special correspondent. in season for this paper; but he writes us on the 6th, that it will not close its labors before Saturday evening, and he thinks it best to defer his letter until he can give a connected and full account of the matter, together with the result of their doings.

☞ We are pleased to learn that J. H. KLIPPART, Esq., Secretary of the Ohio State Board of Agriculture, is preparing for publication in a separate form, the very full and excellent Essay on Wheat contained in his last report. It is the result of careful and untiring investigation, which, although conducted with especial reference to this crop, its varieties, growth, &c., in Ohio, cannot but be of much service also to the farmers of other States.

UNDERDRAINING.—"It will pay." So says J. R. WALKER of Springfield, Vt., in the *N. E. Farmer*. He had a piece of cold, wet land, containing a little less than four acres, the average product of which has been two loads of poor sour hay and brakes, hardly worth cutting. It was underdrained 3½ feet deep, using stone, and the next spring it was found dry, ready to work early in the season, and with 25 cart-loads of barn-yard manure per acre it was fitted for corn and planted the middle of May. The crop was 440 bushels of ears, all merchantable corn—worth, in the opinion of the neighbors, more than the previous products for fifteen years, and paying well the whole expense of the improvement. Such will be the result in many thousand instances, would farmers more generally enter upon this work.

NORTH-CAROLINA TEA.—A subscriber in Guilford Co., N. C., says: "Enclosed you will find a specimen of a kind of tea that we have used in our family for many years. I find that its real worth is known by but very few people, although it grows in abundance on almost every farm in this section of the country. The manner of using it is the same as our common store tea, and takes about the same quantity. I am of the opinion that this tea could be cultivated in any section of the United States. Here it grows naturally, and any family can in one hour's time, procure enough to last them the whole year. I have never tried the experiment of propagating it, but am satisfied that it can very easily be done. It makes an article of tea that is very neat or quite equal to any that we can purchase." [We have not tried the sample sent us, but should be glad to receive, when the season permits, a specimen of the plant itself, that we may determine its name and character.]

BUTTER AND CHEESE.—Franklin county in Northern Vermont, is one of the best Dairy counties in the United States. The *St Albans Messenger* furnishes us a statement of the amount of butter and cheese sent from that place by railroad, from which it appears that during the year 1858, 2,841,677 lbs. butter, and 1,306,370 lbs. cheese were forwarded from that place to market. The editor says:

> The above statement is sufficiently explicit to give any one an idea of the importance of the dairy business to our county. It is proper to remark, however, that comparatively a small portion of this shipment came from Canada, and still less from Orleans county. Yet we deem it safe to challenge any county in New-England or New-York, to show that she sends to market more dairy produce than Franklin county.
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> As compared with the year previous, there is an increase of last year of 428,449 lbs. of butter, and 428,320 lbs. of cheese.
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> If we take the average price of butter at 18 cents per pound for the last year, and cheese at 7 cents, we have the following *fat* and *solid* figures: butter, $511,501.86—cheese, $91,445.90. Total, $602,947. 76!! How ridiculous to complain of hard times with this amount circulating in our midst.

SUGAR GROWER'S MEETING.—A meeting was held at Rockford, Ill., the second Wednesday in December, to further the interests and compare the experience of sugar and syrup makers, from the Chinese Sugar Cane. A fine exhibition of syrup was shown from different parts of Winnebago county. H. P. SLOAN, Esq., of Winnebago, the President—Messrs. Jos. Milner of Rockford, George C. Cleveland of Cherry Valley, S. Scott of Guilford, P. Simpson and A. H. Holmes of Rockford, and several others took part in the discussion, and many interesting facts were elicited, for which if possible we should be glad to make room. From a hasty perusal of the proceedings, we find no evidence of *sugar* making, however; but there appears to have been a general success in the production of a cheap and excellent syrup. The Rockford *Register* says the opinion

> "we believe was uniform that the seed should be planted early and gathered before a hard frost. That it was not necessary to use alkali to clarify the syrup, if it were properly and thoroughly skimmed, filtered, and strained. It was also decided that copper kettles were preferable to any other for boiling. The syrup of Mr. Scott was good evidence on this point, he having used no alkali or albumen, and his sample being by far the heaviest and best of any on exhibition. Iron machines were considered the best for crushing. On comparing notes, we think the best quality of syrup was produced on clay, or sandy loam."

CHAUTAUQUE COUNTY PREMIUM CROPS.—Premiums awarded on field crops, at the winter meeting of the Chautauque County Agricultural Society, held at Fredonia, Dec. 23, 1858.

Corn.

1. W. A. Mayborne—103 4-10 bushels of 56 lbs. per acre.
2. J. C. Bates—89 2-58 bushels of 58 lbs. per acre.
3. J. E. Griswold—76 45-58 bushels of 58 lbs. per acre.

Winter Wheat.

1. D. A. A. Nichols—33 289-1000 bushels of 60 lbs. per acre.
2. H. Hollister—35 bushels of 59 lbs. per acre.

Spring Wheat.

1. E. C. Bliss—24¾ bushels of 60 lbs. per acre.
2. (Ruled out.)

Oats.

1. J. E. Griswold—50 bushels of 32 lbs. per acre.
2. do. do. 47½ bushels of 32 lbs. per acre.

Barley.

1. J. E. Griswold—48 bushels (4 rowed) 56 lbs. per acre.
2. do. do. 47½ bushels of 56 lbs. per acre.

Potatoes.

1. E. H. Darby—85½ bushels to the half acre.
2. (Ruled out.) N.

NEW WHEAT.—*Red Chaff Mediterranean.*—A correspondent of the *Ohio Cultivator*, says a new variety of wheat of this name, is attracting much attention in Chester Co., Pa. It was first noticed among the common Mediteranean, as taller, standing up better, and the heads well-filled. A few heads were sown at first; it has now become quite common and much in favor with farmers. The writer sowed two bushels last fall beside some white wheat—the difference can be seen as far as the field can. Both were sown at the same time, but the new wheat looks as though sown a month earlier.

Our Agricultural Interests—The "Advisory Board."—There seems to be some insuperable difficulty attending the proper representation of our Agricultural interests before the public. All of us, who have any perception of the relation of things, or who have watched the course of national legislation for years past, are convinced that there is no kind of avocation so incalculably important to the country, and yet so utterly disregarded for lack of combined action, and any vocal and responsible head, as is our Agriculture. And what is worse, the efforts made to effect its advancement, are often so misjudged as really to tend toward an opposite result. We fear very much that the Secretary of the Interior, or his advisers in the matter of the recent Agricultural Convention at Washington, have fallen into such an error. Agricultural men are at once prompted to a criticism of the selections that have been made to represent them, and in which they have had no voice; the very object of the meeting is, to say the least, liable to a different construction from that which it ostensibly wore; but, above all, the question of the right of any Secretary to convene at public expense such a body, is at once mooted. The danger is, that between the jealousy which is always felt when official prerogatives appear to have been strained, and the other causes of suspicion or mistrust that exist, the farmers will neither desire to accept the representative officers of the self-styled "Advisory Board," nor the advice it may offer, however good, carry with it enough of weight to affect in any degree the action of government, or enough of merit to silence public tokens of decided disapprobation. "Grant," say the papers, however justly, "grant the right of a Secretary to offer mileage and a per diem or other allowance to any board of "advisors" he may wish to convene from the different parts of the country. Shall we not, then, have under this pretext every kind of political abuse at once sanctioned and invited? What a new engine of political influence is thus invented! what a new placer discovered for the miners upon the public funds." It was our purpose now, merely to intimate the sort of reception which this action of the Ag. Department of the Patent Office is likely to meet with, and which, in fact, it has already received from various public journals. We await a farther knowledge of its proceedings, before permitting ourselves to enter upon farther comments.

Butcher's Shed.—A correspondent at Catharine, Schuyler county, N. Y., gives us a description of a building he has erected for butchering, making soap, and boiling hog-feed, so that all these operations may be performed a little remote from other buildings. The building is ten feet square; a kettle holding four barrels is set in an arch, and a crane with ropes enables the workmen with little labor to swing the hog over the kettle for scalding, and when this is done to swing it back to the pole to hang up.

In the Field Again.—We are pleased to learn that Mr. Chapman is again a breeder of Short-Horns, he having secured the entire herd of Thomas Richardson of West Farms, Westchester Co., N. Y. Most of this herd were imported by Mr. Richardson with his characteristic liberality, and without regard to expense. They count among their sires such bulls as Baron Warlaby (7813)—Crown Prince (10,087)—Hector (13,002)—Hopewell (10,332)—Royal Buck (10,750) &c., &c., all bulls of great celebrity both in England and this country. This herd is perhaps more deeply bred in the celebrated Boothe blood than any herd in this country, and as Mr. Boothe now refuses to *sell* any more male animals from his herd, they cannot at this time fail to be well appreciated. They are now all at the "Mount Pleasant Farm," excepting Lady Constance, which will be sent out soon. Mr. Chapman will be pleased to show the herd to all persons who feel an interest in fine stock. *

Draining.—There is probably no one branch of improvement in which greater progress is being made on our farms, than that of draining. Many new tile machines have been put in operation during the past year, and a ready market, so far as we know, has been found for all the tile they could turn out. A correspondent in Bullit Co., Ky., informs us that one of his neighbors has procured tile from an establishment near New Albany, Indiana, to be laid the coming season, and a gentleman from Indiana, who has visited our friend John Johnston, to obtain personal information in relation to the operation and effects of draining, informs us that he has made a contract for 100,000 tile, all of which he hopes to have laid the next season.

A Good Example.—Mr. Charles O. Newton, an enterprising merchant of Homer, Cortland Co., offers inducements to his customers, that should attract them in large numbers, while at the same time they are far different in kind from the ordinary style of chance gifts, and similar evasions of the State lottery laws. Mr. N. has recently purchased a quantity of our *Annual Register of Rural Affairs* for 1859, for presents, and we notice by the *Homer Republican*, that he offers both this, and yearly subscriptions to the Co. Gent. and Cultivator, as Premiums upon purchases, at one time, of specified amounts. His sagacity we regard as fully proved by his extensive advertising, and we have no doubt the end will, in this instance, prove the excellence of his judgment.

Sheep in Steuben County.—A correspondent, who has examined some flocks in Wheeler, Steuben county, and particularly those of Gen. O. F. Marshall and Mr. Julius Stickney, writes that he thinks he can safely say that there are as good sheep in this town, as can be found in the State. They are Merinos, bred from the best flocks of Vermont and Connecticut.

Fine Mutton.—Messrs. Charles & Van Meter had a beautiful display of mutton on exhibition at their admirably arranged stalls in the Center Market, last week. Among it was a carcase of Leicester mutton, sent by Mr. John A. Rice, of the Anglo-American Hotel, Hamilton, C. W., to Gen. J. L. Mitchell of Congress Hall, weighing 218 lbs.—a weight rarely reached by any breed of sheep. There were also fifty carcases of yearling fine-wooled sheep, which we were told averaged 80 lbs. each.

Cutting Hay, Straw, &c —A Vermont correspondent writes us as follows:—I have several times seen queries and suggestions in the "Country Gent.," in regard to the policy or advantage of *cutting* fodder. Having been experimenting on a small scale for five years past, I conclude it a waste of labor and machinery to cut *good*, well cured hay for any animals who have good teeth and time to use them, so far as regards the nutritious properties or effects of the hay. The idea that because the excrement from cut hay is not so dry and hard, it is conclusive evidence that it has been better *digested*, I think not well founded, as I think any one will conclude from minute observation and examination; it is more moist *simply*, and that because more moist when taken into the stomach. I do not cut *good* hay for any stock with good teeth, except I wish to give them meal or wish to bait them in a hurry—in either case, cut and wet the hay, and mix the meal with it. But for *musty* or *inferior hay*, *straw*, and *stalks*, I want a good hay-

Mules *vs.* Horses —A writer in the *Genesee Farmer* says on the side of the first, that an average lot of two-year old mules will sell for as much or more than an average lot of three-year old colts. Mules require less food than horses; are less liable to disease and unsoundness, and live to a much greater age. The mule will perform more labor, according to size, at much less expense.

cutter and a good root-cutter, and plenty of vegetables and India-wheat meal. R. N.

SEEDS.—I send you a few seeds of the California Citron, called by some the Apple-pie Melon—it grows large, and is excellent for preserves and pies. Also four seed of a French Citron—it also grows large and is much more like a pumpkin than a citron—good for pies. WILSON DENNIS. *Applebachville, Pa* [What were the six large seed—an inch in length—enclosed in the same envelope ?]

FRUIT GROWERS' SOCIETY OF WESTERN NEW-YORK.—At the meeting of this association, held at Rochester, Jan. 5, the following officers were elected :

President—B. HODGE of Buffalo.

Vice Presidents—J. J. Thomas, Union Springs ; W. Brown Smith, Syracuse ; Prof. W. R. Coppock, Buffalo.

Secretaries—C. P. Bissell, Rochester ; Jno. B. Eaton, Buffalo.

Treasurer—W. P. Townsend, Lockport.

Executive Committee—P. Barry, Rochester ; J. J. Thomas, Union Springs ; C. L. Hoag, Lockport ; W. B. Smith, Syracuse ; Joseph Frost, Rochester.

DIOSCOREA BATATAS.—The largest specimens of this root ever seen at the Mass. Fairs, were grown by Messrs. Hovey. They measured 23 inches in length, and were cooked (one boiled, the other roasted,) by the chairman of the committee on vegetables, who reported that "they were submitted to the taste of a company of amateur horticulturists, who were of the opinion that if they were ripe, there was nothing in them to recommend their superiority over the Irish or Sweet potato." So we supposed.

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TO CORRESPONDENTS.—Our thanks are due to our friends for favors received during the week ending

DEC. 27—From J. W. C., H. L. T., L. H. Webb, H. R. Forster, A. Shelton, S. P. R., E. Sanders, E. Cornell, W. C. Pinkham, A. D. G., O. P. W., W. H. Sotham, H. S. Ramsdell, Suel Foster, J. Johnston, John J. Craig, W. S., W. C. Richards, Quien Sabe, W. I., C. I., A. A. B, Wm. Bacon, J. W. C., D. Wyrick, G. B. H, Daniel Barker, J. H. H., C. N. Bement, D. S.

JAN. 3—From D. S. Heffron, W. A. Sotham, R. R. S., L. Durand, D. Clizbe, Lockport, G. H., T. C. Peters, Mary D., John T. Andrew, J. W. S., S. Perley, W. H. Benson, E. Sanders, Columella, E. F. Peck, W. Chamberlain, W. A., C. B., F. K. Phœnix, E. R., A., C. E. Goodrich, Forrester, J. W., W. P. Jr., J. H. C., W. Steele, W. A., A. M.

JAN. 10—From Cato, Columella, J. Case, E. L. H., E. J. Dole, W. C. Y., W. J. E., Mass., E. Aborn, B. J. H., R. Kelso, B. B., B. H. Mattison, S., J. W. C., A Plantsman, Geo. R. Underhill, D. McCulloch, Wm. Gray, A. R. A., Observer, Elsie M. Emery, A. G. E., S., E. Corneli, C., M., S. E. Todd, Regina, T. V. M., K., Forester, Daniel Parker, Mrs. Sarah S. Sockwell, E. S., W. R., Jas. Weed, D. G. Williams, E. S. B., A. A. Cole, Geo. Trowbridge, N., H. Hinkley, J. I. R., R. N., C. T. Alvord, W., R. M. Conklin, C. I., W. E. Dodge, Hornellsville Farmer, L. A. Aspinwall, E. W., L. Smith, E. S.

Jan. 17.—J. Cope, S. M. Reynolds, Mellie, E. Merritt, Cato, A. Chandler, Simeon Abbott, J. Tallcott, L. F. Dilloway, H. A., J. C. S., Levi Durand, S. B. Buckley, S. J. S., G. L., Prof. A. L. Kennedy, W., O. E. Wood, (see p. 28 last no.,) J. A. K., Wm. Summers Sen., Forester, G. W. B., W. C. S., Oliver Babcock, T. G. Yeomans, D. A. A. N., J. R. D., D. A. A. Nichols, W. D. Clark, W. P., H. Griffing, R. Hedges, Pastor, C. E. Goodrich, E. Schmidt, F. A. Nauts, Wm. Smith, J. Van Buren, W. J. Patch, J. Best, B. Willard, P. Henderson, Charles T. Jackson.

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THE CULTIVATOR.—Readers are reminded that only Fifty-two Cents pays for THE CULTIVATOR and REGISTER both in Clubs of Ten, and that a copy of each is given to the club agent in addition.

The Barometer for Farmers.

A correspondent requests some remarks on the use of the barometer to farmers.

We have employed one for many years, and have often found it of great advantage. Farmers generally, it is true, may predict the character of the weather for some hours ahead, by their own observation of the sky and wind, but the barometer is an important auxiliary in this guessing. The rule is very a simple one :—If the mercury is rising, fair or settled weather is sure to follow—this we have never known to fail. If on the other hand, the barometer continues to sink, wind or rain will follow—rain, if in spring or summer, and wind in autumn or winter. It sometimes happens that a moderate sinking of the mercurial column will not be followed by rain ; and at other times the rain has been known to commence simultaneously with its fall, and both go on together. But these occurrences are rather exceptions.

Sometimes the shrewdest guessing by observation has failed, while the indications of the barometer have been verified. In one instance, for example, there was every appearance of a fair day after a rain,—the clouds broke away, and the wind was "from the fair quarter of the sky." No farmer would have hesitated to begin cutting his hay, with a certain prospect of good hay-weather. But the barometer, singularly enough, began to sink—and shortly after rain came up, and a succession of showers continued during the day. In many other cases, the appearance of the clouds and the course of the wind, indicated rain, but the barometer remained unmoved, and no rain came. During the continuance of a long rain, it sometimes begins to rise, and as certainly shows the actual approach of fair weather, some hours before the rain ceases. During "unsettled" weather, its rapid sinking always correctly forebodes a storm.

We are told that in some localities, its indications are more uncertain, but we have as a general thing, found its use of much value. No doubt there are many instruments that are imperfectly constructed, and are consequently unreliable. Those furnished with a dial plate, are rarely as correct or, sensible to changes, as the simple mercurial column. We greatly prefer the latter, and would not on any account procure the former. A good barometer may be bought for twelve dollars, sufficiently accurate for all ordinary purposes.

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Oiling Harness.

I have noticed in Vol. 12, No. 4, directions for oiling harness ; but as many who will likely take the present vol. may not see it, and as I have lately met with a process which was recommended by A. Baker, proprietor of he most estensive livery establishment in Rochester, I torward it for insertion. It is as follows :

Take Neat's Foot Oil and ivory or patent black—the latter well pulverised, or to be made so before using. Mix thoroughly, adding the black until the oil is well colored or quite black. In cool weather the oil should be warmed somewhat before mixing. With a sponge apply a light coat of the mixture—only what the leather will readily absorb, unless the harness is very dry, in which case a heavier coat may be necessary. After the harness is dry, wash thoroughly with soap suds. In making the suds use good Castile Soap and cold rain water Warm water should never be used on harness leather. Apply the suds with a sponge. Rub off with buckskin. This will give your harness a nice glossy surface, and the leather will retain a good color and continue pliable for months. If it becomes soiled with mud or sweat, an application of soap and water, as above directed, (without oiling) will be sufficient to give it a bright appearance. Two applications of this oil and black mixture a year (or once every six months,) will be sufficient to keep the harness as ordinarily used, in good order. J. COPE. *Westchester, Pa.*

HAY PRESSES—*New arrangement.*—From and after this date, I will sell the castings, with right to build my Parallel Lever Hay Press, to any person wishing to build for himself or others. This Hay Press has been in use for five years, and its just celebrity has been earned by the PERFECT and SATISFACTORY manner in which it has always operated. Finished Presses constantly on hand. The patent for some territory for sale. For particulars, address

L. DEDERICK, Albany, N. Y.,
Patentee and Manufacturer,
Jan. 27—w4tm1t No. 68 Liberty-street.

VALUABLE MICHIGAN FARMS FOR SALE.—The late Dr. B. Ticknor's farm—320 acres—3 miles south-east of Ann-Arbor—the *model farm* in Washtenaw county, with buildings, orchard, soil, timber, water, fences and every thing to suit a farmer of taste and means—is for sale to settle the estate.

The "Bishops farm", 1300 acres, 15 miles north, and the "Place farm," 480 acres, 9 miles north-west of Ann Arbor—both good soil, well watered, well situated, and adapted to grain or grazing—will be divided to suit purchasers, and sold *very low.*

Titles good and terms of payment favorable.

Persons wishing residences in, or farms near this city, can, by calling on me, select from a very extensive list of Real Estate for sale. E. W. MORGAN,
Jan. 6—w1tm2t* Ann Arbor, Mich.

COLEMAN'S FARM MILL, **Cornstalk Cutter and Grinder**—(Hickok's Patent.)

GRIFFING BROTHER & CO.,
60 Cortlandt-st., New-York City.

Farmers sending us their address will receive our *Illustrated Catalogue and Almanac* for 1859. Dec. 9—w&m3m

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SHARES' PATENT CULTIVATING, Potato and Corn Covering, Hoeing and Hilling Machine, and his Coulter Harrow or Heavy Sod and Soil Pulverizer, are getting to be the most universally used implements now known. They are second only to the Plow, and the product of half an acre will pay for them—consequently every farmer who cultivates 25 acres of land cannot do without them, and would not be without them after he has tried them, *for five times their cost*, if he could not get others or duplicates of them.

The POTATO AND CORN MACHINE saves the labor of from six to eight men every day they are used, and of course *pay for themselves in two days' work.*

The COULTER HARROW or Pulverizer, not only breaks up the ground effectually in working through it once, (while the common harrow requires to go over the ground two or three times before it is soft, and then only on the top,) but *it covers grain equal to the drill*, putting the seed in drills, which prevents it from being washed out in the spring—also from being frozen in the fall. Crops of grain put in with the machine in this vicinity last fall, are perfect, while grain harrowed in with the common harrow is good only in spots, as it was not covered and protected, and the unexpected cold weather in November killed it.

The price of these three machines is only $35, all complete, and warranted, and farmers who want them are requested to make early application, as we could not supply the demand for them last spring. *Send for a Circular.*

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P. S. Our assortment of all kinds of AGRICULTURAL IMPLEMENTS is complete, and our HORSE POWER, THRESHER and SEPARATOR is, as its name (Excelsior) indicates, not to be surpassed. P. & E.
Jan. 6—w4tm1t

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RURAL ARCHITECTURE,	IMPLEMENTS & MACHINERY,
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This we think is the best book yet published, for School District and Town Libraries, as well as for Premiums to be awarded by Agricultural and Horticultural Societies.

LUTHER TUCKER & SON,
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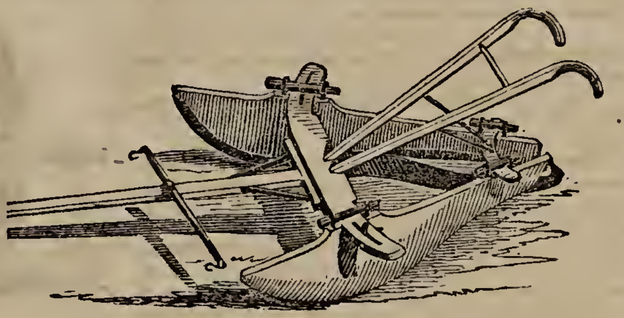

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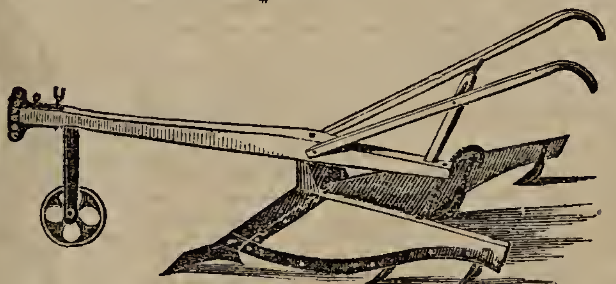

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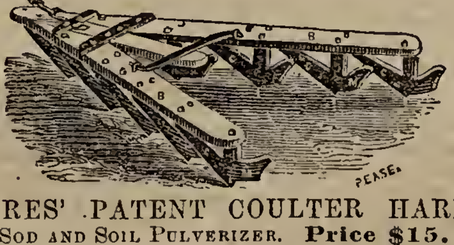

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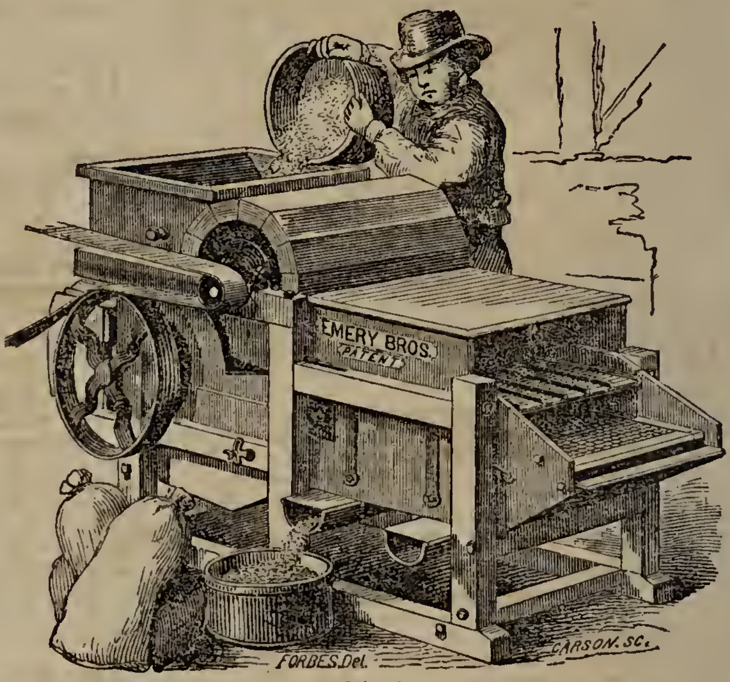
EMERY BROTHERS'

CLOVER GRATER AND CLEANER.


EMERY BROS.
PATENT
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CARSON.SC.

Fig. 1.

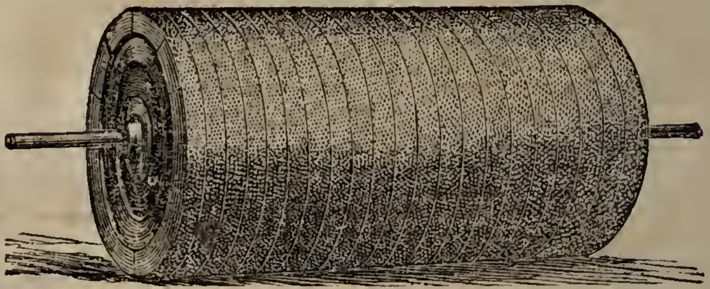

Fig. 2.

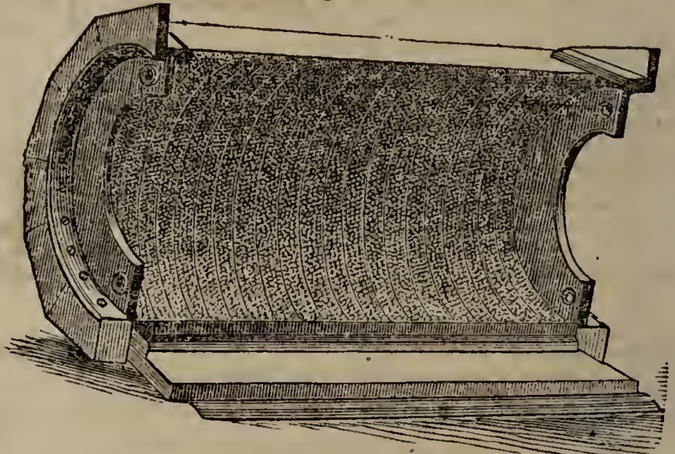

Fig. 3.

THERE are, perhaps, fewer good machines for the purpose of separating the kernel of clover-seed uninjured from its boll, or as some call it, the cell, than for almost every other farming purpose.

So great has been the difficulty, as well as the tediousness of the operation, with even the best machines, (until recent improvements,) that farmers have been deterred from growing clover-seed for market, and even have purchased their own seed from distant sections of the country, where Water Power has been considered indispensable for the process —it being the practice of farmers for many miles around, to convey their clover chaff to such mills, generally paying seventy-five cents to one dollar per bushel, for having it milled, to say nothing of the loss of time and expense of going to and from the mills with it, to which should be added the waste of all the chaff, which is carried off by the stream, instead of going into the manure heap, and often with great loss of seed in addition.

The machine manufactured by Messrs. EMERY BROTHERS, of the ALBANY AGRICULTURAL WORKS, and illustrated at the head of this article, (fig. 1,) is claimed to be what every neighborhood, as well as every large farm, should have, and will increase the production of clover-seed, as the cotton gin did the cotton culture.

This machine is so simple, efficient and rapid in its operation, and so easily driven and operated by any person at all acquainted with the use of an ordinary threshing machine, that it commends itself to the careful attention of the farming community.

Fig. 1 shows the machine as in operation, having its grating cylinder and concave, screens, fan, seed-spouts, &c., all complete.

Fig. 2 shows the cylinder, which is of the same dimensions as those used by same makers in threshing machines. This is entirely covered with iron bands, about one and a-quarter inches wide, and one-eighth inch thick, wound round and round spirally, covering evenly the whole cylinder. This iron covering is first cut up precisely like the coarse rasp used by blacksmiths in horse-shoeing, to file the hoofs. It is then case-hardened on one side, so every point or tooth is converted into steel, and of the hardest possible temper to stand and be durable.

Fig. 3 shows the inside of the concave, being entirely lined with the same material. This concave encloses about one-half the cylinder, and is adjustable by sett screws, to any degree of distance from the cylinder, This machine, like the Grain threshers from the same establishment, is overshot, preventing thereby any hard substance getting into it to its injury. The chaff is agitated and fed into it by a revolving picker, extending lengthwise the hopper, just at the opening which receives the chaff, between the cylinder and concave.

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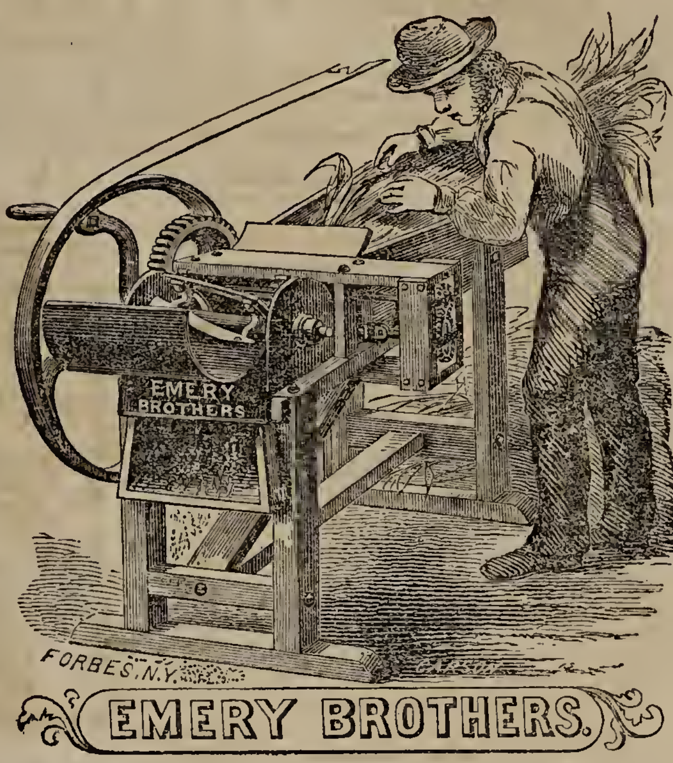
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EMERY BROTHERS,
Albany Agricultural Works,
Jan. 27—w&m1t Albany, N. Y.

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Albany, N. Y.
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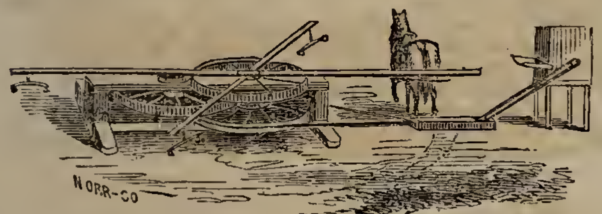

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Dec. 2—w9m2t.

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March 11—w1am—mtf.

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8th. It occupies but little room, and is easily removed from place to place.

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THE CULTIVATOR.

THIRD To Improve the Soil and the Mind. SERIES

VOL. VII. ALBANY, MARCH, 1859. No. III.

PUBLISHED BY LUTHER TUCKER & SON,
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ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

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THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS—144 pp. 12 mo.—price 25 cents—$2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price $1.00—sent by mail post-paid.

Wheat in Western and Central New-York.

Wheat, as a general farm crop, has for some time and to a large extent, ceased to receive that attention formerly bestowed upon its culture in Western and Central New-York. It now, however, seems to be reviving again—it is the general remark that more winter wheat was sown last fall than for several years before—the comparative exemption from the midge of much of last season's crop, having prompted to another trial many who were almost hopeless of further successful wheat culture. In view of these facts, we now take occasion to present some thoughts on the subject—opinions for some time held, and in part before expressed—but still, we hope, worthy of notice by our present parish of readers.

The abandonment of wheat culture, has been in many instances greatly to the profit of the farmer. Like barley growing at the present time, wheat growing had been *run too hard*—had been pursued upon poor soils or those worn by long culture of this grain—had been attempted by methods of husbandry unsuited to its wants, and but partially developing its productive capacity, and could well be laid aside for other branches of agricultural production. Cropping with wheat, regardless of the exact character and fertility of the soil, regardless of the changes of climate and season which seem to have taken place, and above all, regardless of the character and habits of the new and potent insect enemy it must now contend with, has resulted in a loss of millions to the farmer. It was well for him to pause in his course—pause until he considered these influences—that he may again profitably give a share of his attention to this late great staple of our country.

What are the requisites of wheat growing, and what the causes of its general failure among us? A brief consideration of these questions will show us, that under certain circumstances its culture is still remunerative, and that under other certain circumstances we but throw away the labor and expense incurred in attempting its production.

1. To grow wheat, we need a fertile, well-drained soil—either a porous, heavy loam, or a clayey soil made porous by artificial drainage. A soil containing lime, and above all so rich as to be capable of sustaining a large and heavy growth, is *now* a necessity of the wheat crop. It must be a porous soil, that the plants may not winter-kill, and that their maturity be not retarded by a late, wet season. A rich soil, if liable to suffer from the long continued rains of spring, will be a cold soil as well, and produce an unhealthy vegetable growth, maturing slowly as well as unevenly, and hence extremely liable to the various casualties which affect the wheat crop. What is called a *warm*, *quick* soil, is most certain to secure a thrifty, perfect growth, and an abundant product.

2. Another demand of the wheat crop, is sowing so early that the plants may get a fair autumn growth, be prepared for the rigor of winter, and for tillering so as to fill the ground in the spring. Early sowing also tends to hasten the ripening of the crop, at least to some extent. The work must be timed right—too early may be as injurious as too late. Attention should also be given to the selection of the most productive and vigorous varieties—and early maturity is a quality particularly essential.

3. That the land be well tilled, is also a requisite of success in wheat growing. It should be *in the best order* possible; if manured before sowing, the fertilizer applied should be intimately mixed with the soil, and not far below the surface. Let the land be in fine tilth, and then drill in the seed, and an additional security is had against winter-killing, and other injuries consequent thereon. Rolling is an excellent practice, if the soil is mellow and likely to remain too light for wheat, as is occassionally the case.

In the *wheat midge* we have the alleged cause of the failure of the wheat crop, and its ravages have been truly disheartening. But many serious failures occurred before this injury became general—failures from poverity of soil, caused by sowing wheat after wheat or other exhausting crops—from want of drainage, and consequent winter-killing, or rust—from late sowing on imperfectly prepared ground, also inducing blight and rust, and from poor management generally. All these causes prepare the wheat plant for the attacks of the midge, and it will generally be found that the poorer and later the crop, the less there is left by the fly to reward the labor of the farmer; while the *best wheat*—the earliest, healthiest, and heaviest growth,—still yields a remunerating product.

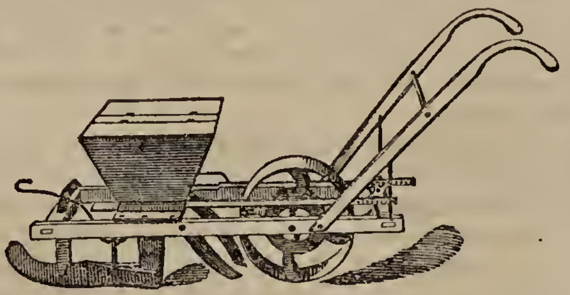
The average injury by the midge, in many instances known to us, has been from five to seven bushels per acre—the lighter and later the wheat, the greater the comparative loss. A light yield—say ten bushels per acre—will be one-half or more destroyed; a good crop of twenty-five or thirty bushels per acre, will seem comparatively uninjured, though one-fifth has gone to feed the insect. Hence the importance of securing a good growth, for a light one fails to repay the labor of its production. Hence we advise the sowing of such soils *only* as are in fertility and character suited to the crop, and of sowing these early to vigorous and early maturing varieties. Let farmers select such soils and situations, and sow wheat again, but not an acre more than they can sow in the best order, as above advised, and we think they will not only be able to supply home consumption, but have a surplus for their neighbors. High farming will probably be found as effective in decreasing the ravages of insects in this as in the old country, where doubling the average product of the wheat crop, has been declared to render the devastation of insects of but small account to the farmer.

* * *

Corn and Turnip Drills.

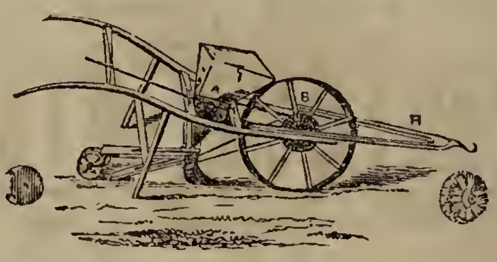
Messrs. Eds.—I like the idea of the editors of agricultural papers testing the different farm implements that are offered to the public, and giving their readers reliable information about them. This alone would be worth more than the price of your paper. I would especially like to know what is the best drill for sowing ruta baga seed, and for planting corn. Also the best root-slicer or cutter, with price, and by whom for sale.
J. M. Y.

The best corn-planter we have tried is Billings'. It is drawn by one horse and drops in small hills about ten inches apart, or more remote as may be desired, and the rows three feet, more or less, asunder, as required.



Billings' Corn Planter.

It works well on inverted sod, and pulverizes or scrapes the mellow earth over the seed in a more perfect manner than can be done by hand. Hence we have found the corn to come up more evenly after the machine than when planted by the hoo. Doubtless a turnip-dropper might be attached to it. The price we think is $16. Emery's planter and drill is also said to be an excellent one—price $14. Willard's patent root-slicer, which we noticed a few weeks since, we have found to be an excellent one—price $10.



Emery's Seed Planter.

Small patches of ruta bagas may be sowed in the following manner, without the expense of purchasing a drill. Mark drills or furrows by a "marker" something like a corn-marker, that is resembling a very coarse rake, the teeth being two inches in diameter and twice as long, and 2 to 2½ feet apart. This by drawing over the level and harrowed surface, will make several furrows at a time. Next nail a pint tin-cup to the lower end of a wood rod about the size of a walking cane, the rod serving as a handle for shaking the cup near the ground without stooping. Then make a hole in the bottom of the cup a little larger than a turnip seed. Place the seed in the cup, hold it by the long handle just over the drill, and walk along rapidly, shaking it all the while. It will drop the seed evenly along the drills, after which the whole is covered with a light harrow or brush running lengthwise with them. The hole in the cup may be enlarged or another made if a more rapid discharge of seed is desired.

* * *

Breeds of Swine.

What breed of hogs do you consider best for the farmer to raise? those that will make the most pork for the same amount of feed? and mature in the shortest time? and what weight will they make when full grown? Berkshires, Suffolks, Spanish, and Essex, are all advertised, but a novice has nothing from which to judge of the best kind. Would an article showing the relative merits of each be out of place? If you publish anything on them, please say whether any of them are spotted, or any other color than white. L. F. D.
Brown Co., O.

We have not sufficient and accurate information as to which breed would be most profitable; for, as with cattle, although we have long controversies on the merits of different breeds, yet none seem disposed to settle the question by instituting carefully conducted and full experiments. Our own opinion is, that if our correspondent will procure either Berkshire, Essex, or Improved Suffolk, he will have excellent swine, and we do not think there is much difference in their value. Suffolks are usually white; Berkshires mostly spotted or black; and Essex variously between them. We are not prepared to say to what size they will attain; much will depend on their management. A young animal, fed with as much *undiluted* sour milk as he wants, through his first season, will probably more than double one scantily fed on grass. They have occasionally been made to weigh 400 to 600 lbs.

* * *

Manure and Potatoes.—Many have long since observed that high manuring promotes the rot of the potato. By uniformly planting on rather dry, unmanured land, we have scarcely ever been troubled with the rot, taking care at the same time that the tubers are dry when housed. A correspondent of the New-England Farmer furnishes a striking experiment—an acre of sod was plowed and planted with potatoes, which yielded about a hundred bushels, all healthy, except where a large heap of manure had lain all winter, and was drawn away in the spring. The crop here was much heavier, but nearly all rotted.

Transactions of the N. Y. State Ag. Society for 1857.

This is a handsome volume of 800 pages, abounding with valuable practical matter. The benefit conferred by the Society in the publication and dissemination of this matter, is scarcely secondary to that resulting from the exhibition to the tens of thousands of practical farmers at its great fairs, of the most improved products of human ingenuity and agricultural industry. There are several papers of especial interest. One of the most so, is Dr. Fitch's continuation of his work on destructive insects, which, in the present instance, consists of sixty pages on those which infest evergreen trees. If the Society were unable to do anything else, it should keep Dr. Fitch in the field for a life-time, for nothing can well be more important than a thorough knowledge to the farmer and other cultivators, of noxious insects, and nothing is adding more to the reputation of the Society, both in this country and in Europe, than his labors. The appended paper, now republished, originally prepared by Thomas Say, on that portion of Hemipterous insects, which include the squash bug and the bed-bug tribe, although exceedingly valuable as an entomological contribution, possesses little interest to the farmer, for Say was only a nomenclator, and in his work on Entomology scarcely alludes to the habits of insects.

The Report of the farming operations of Robert J. Swan of Geneva, furnishes a good specimen of improved and successful farming, where capital is at command. The proprietor was educated a merchant, but to restore lost health, chose farming, and after two seasons practice under two of the best farmers in the State, bought a 350 acre farm. The soil was wet and tenacious, and the crops usually small. It was badly fenced, abounded with swales and sunken places, where coarse grasses and weeds had full possession. In three years he had drained 200 acres. The remaining portions were afterwards drained, over 300 acres in all,—at an expense of about $6,000, being over 60 miles of tile drain at nearly $100 a mile. There are ten miles of post and board fence, costing $3000. Some of the results of the draining are the following: In 1852, he had 200 bushels of wheat on 40 acres of undrained land, or 5 bushels per acre, the wheat midge causing no damage. In 1857, the drained land gave 20 bushels per acre, and the committee who saw it cut, thought that, but for the damage of this insect, it would have yielded 35 to 40 bushels per acre. The meadow lands on the drained portions, average for the whole, two and a half tons per acre, and the hay is much more nutritious for stock than before. Burrall's mower is used, and cuts with one team about ten acres a day. The nett profits of the farm in 1857, were over three thousand dollars, not estimating straw from 80 acres, and 45 loads of cornstalks, believed to be worth $6 or $700 for fodder and manure. The main points of management in tillage, are "thorough draining, ample manuring, and deep plowing."

The report of the Dairy farm of Zadoc Pratt of Greene county, is another example of successful farming, on land possessing much less natural fertility. Fifty cows yielded in one year 6,500 lbs. of butter, so good as to bring 22 to 27 cents per lb., or over $1500.

The experiments of J. Harris of Rochester, on manures, develope, or rather corroborate some curious results, and are worthy the perusal of all who claim to tell by reasoning *a priori*, what will be the effect of specific manures.

The papers of Prof. Brewer, of Prof. Wilson, and others, on European Husbandry, &c., contain a great deal of interesting matter and valuable suggestions. The usual amount of various practical instructions, made up largely from the county reports, constitutes a very acceptable portion of the volume; and the severe and repeated censures on *racing at fairs*, shows that this reprehensible practice is bringing its legitimate fruits.

Feeding off Pastures.

Messrs. Editors—The proprietors of a pasture, containing some 8,000 acres, located in this place, desire to know the general opinion, if any, among the intelligent stock-growers of the United States, relative to the number of sheep which should be equal to a full-grown cow in feeding on pasture—the average live weight of sheep being 50 lbs.—a cow 500 lbs. How many of the former would be proper to turn into a pasture to one of the latter? W. Chamberlain. *Waialua, Sandwich Islands, Nov.* 9th, 1858.

Farmers disagree as to the relative number of cattle and sheep that may feed in a given pasture—doubtless for the reason that both vary considerably in size, as well as in their requirements of food for a given amount of flesh. As a general rule, however, the same aggregate weight of different animals require the same amount of food. A cow at 500 lbs. will eat about as much as ten sheep at 50 lbs. Some animals of the same species (men not excepted) eat much greater quantities of food than others, without reference to the weight, but still there is a general average. Pasture eaten closely, will not afford so much food per acre as pastures allowed a freer growth, and thus to have the rule more thoroughly correct, it will be best to reduce somewhat the number of sheep.

Sowing Grass Seed.

Messrs. Editors—My experience in farming is very limited. Please assist me. I have a field of 15 acres, which I cultivated with corn in 1857. The yield was 70 bushels per acre. Another field of 20 acres, cultivated with corn in 1858, which produced near 80 bushels per acre. I intend planting the 15 acre field with corn, and the 20 acre field with oats the next spring. I wish to set one of these fields to clover, and the other to timothy. I expect to sow the clover or timothy at the last working of corn, about the last week in June. I am at a loss to know if it will be best to sow the clover or timothy at the planting or soon after the harvesting of the oats. I am afraid the growth of oats may smother out the young grass, if planted in the spring. Now which of the grasses shall I plant with the oats, and when?

I have succeeded well with red-top with corn the two past seasons, and expect to sow some 40 acres at the last working of my corn the next summer. My lands are the French Broad River bottom—beautiful light sandy loam, easy of cultivation, and very fertile. F. W. Johnstone. *Dunn's Rock, N. C.*

Our own experience indicates that unless the weather should continue moist, success will not attend the sowing of clover seed among corn in summer. Either clover or timothy may be sown as soon as the oats are harrowed or drilled in, and covered with a roller or brush—they will not, however, grow much till the oats are removed. And unless the ground should be quite dry when the oats are harvested, the timothy would make as much growth another year if sown early in autumn after them. The clover may be sown early in spring after the corn, and will give a good or fair crop the same season. We have found generally that a grass crop succeeds quite as well sown alone after a grain crop as with it, the only advantage of the latter practice consisting in the saving of labor in preparing the ground. Different soils and localities, however, give different results, and experiment will be the best guide.

Open and Covered Drains.

Messrs. Editors --I wish to ditch a swamp that has three large springs feeding it by a brook; the springs are forty rods removed. How shall I make the main ditch—open or blind? If blind, how is the best way to let the brook into it, to be safe against drift? Some one's experience can tell. s. j. s.

It is nearly impossible to make an open ditch deep enough. The main drain must be deeper than the side drains, and the latter are generally made too shallow. We have no doubt that many of the recently reported experiments on the great success from draining wet places and quicksands, will in a few years result in entire failure from this cause alone. If turbid water finds its way into the tile, it must ultimately fill them with sediment. Hence sufficient depth must be reached to occasion a thorough filtering.

An open drain must have each of its sides sloped as one and a half, to one in rise, or they will cave in. One only four feet deep would then have to be at least twelve feet wide, besides the breadth of the bottom. The channel for a brook to pass through a covered drain should of course be sufficiently capacious, and in entering, it should pass through a broad bed consisting of many loads of small stone and coarse gravel. If the brook runs rapidly and turbidly into the ditch, and then more slowly through it, it will be sure to deposit sediment and finally choke up. But if the water runs as rapidly, or a little more so, through its whole length than before, it will carry through all the sediment, and and no detriment will follow.

Underdraining.

Messrs. Editors—I have read with great interest, your articles on draining. We are engaged in digging some blind drains, on a tract of land that is low and nearly too level to get a good outlet. I wish to inquire if you have ever experimented in filling blind drains by throwing in small stones promiscuously from the commencement, without leaving a channel in the bottom? If so, what is your opinion of their merit, durability, &c.? With us the expense of tile would be too great, and suitable flat stones are very scarce. What would be your advice in this matter? A. S. Hopping. *Hanover Neck, N. J.*

Imperfect ditching is scarcely better than none at all. A drain must be deep enough, and have capacity to carry off the water freely. If not deep enough, it is liable to become choked in the course of years by the gradual infiltration of sediment. The depth should in no case be less than three feet, especially for light soils. If the channel is too small, the water escapes too slow to be of great benefit.

As a general rule, a tile-bore only two inches in diameter, and with a descent of but one foot in a hundred, should not drain over half an acre of land rendered wet chiefly by falling rains, (counting the breadth of a rod on each side the drain,) and with a descent of one foot in eighteen, twice the amount of water will be discharged, and consequently this will do for an acre. In other words, the former should not be more than forty rods long, before entering a large bore, nor the latter more than eighty rods. If three inches in diameter, the length may be nearly tripled, for corresponding descents. The upper half of a long drain may have small bore, and enlarging as it descends. The preceding results are derived from careful calculation founded on experiment.

All other modes of filling ditches should admit of an equivalent flow of water. If the channel is made of stone, it should be considerably larger, as the irregular sides impede the current. But if filled with small stones promiscuously, the current will be retarded many fold, and this mode should never be adopted unless for very short drains (or which is the same thing, with but little water to draw off,) and with pretty steep descent. We have often seen this mode of filling adopted; and the same water that would pass freely through a two-inch tile, would fill such a drain up nearly a foot, unless the stones were very large, in which case the earth would soon fall in at top and sides among them.

Where the soil is a strong adhesive clay, stones for channels may be used with some safety; but where it is of a lighter or more friable character, it is difficult to prevent the washing and settling of the earth among the stones, and tile forms the only secure channel; unless durable wood can be had, sawed into narrow boards; or brush, for very short drains of steep descent.

The Advisory Board and Pat. Office.

[Correspondence of The Cultivator.]

"I am sorry to see so much in the agricultural and other papers, ridiculing the "Advisory Board of Agriculture," and abusing the Secretary of the Interior and Commissioner Holt. They are men of high character, and what they did in getting up this meeting, was with the very best intentions, and will result in much good. Agricultural Statistics—correct ones, are of vast importance to the governments and people of England and France, and equally so *here* A certain sum was appropriated by Congress for agricultural purposes, and placed in the hands of the Secretary of the Interior and Commissioner of Patents, to be expended for purposes connected with the interests of agriculture, some portions of which are expended in the purchase of seeds for distribution *all over* the country. It is not expected that every seed is going to return an hundred fold, but I am satisfied that great benefit is and will accrue to the country, in the introduction of many of the seeds spread broadcast among the farmers and others. About $3,000 of the sum is, in conjunction with an equal sum from the Smithsonian Institution, expended in procuring meteorological observations—amount of rain falling in a given time or place, &c., all of which will result in incalculable good. If the Secretary and Commissioner of Patents thought best, and of course they did, to invite delegates to meet at Washington, they did not exceed the limits of their duty, or squander government money for political or other mercenary or selfish purposes. Mr. Holt is one of the best and soundest lawyers of the country, a gentleman of worth and wealth, and who succeded Mr. Commissioner Mason, only by the most urgent solicitations of the President. Mr. Thompson is a Mississippi planter, a man of great wealth, a practical man too, in the science and practice of agriculture. 'Tis said this is a free country, and every body has a right to express his opinion upon all matters, whether they understand them or not. One of the objects I believe they had in view, was to invite farmers and others to meet at Washington, partly at least, to let folks know *farmers were somebody*: but the course that many of the papers have taken, is to render the profession of the farmer contemptible and disreputable, and encouraging our young men to engage in any other pursuit than that of farming. You have doubtless read the published list of delegates attending the convention—most of them are men deeply engaged in the improvement of agriculture, and they are men of sense, strong-minded men, capable of acting well their part in almost any and every department of government."

Surface Flowage from Wood Lots.

Few farms in this land of "reserved wood-lots," are so favorably situated that they have no fields injured by water leaching down upon them from adjoining woodland. The water of melting snow in spring, and of showers in summer, keeps up so abundant a supply, that vegetation is checked or wholly destroyed, especially upon clayey hill-sides or other impervious subsoils. Hence it is desirable to check or turn aside such overflow, and thus escape the injurious effects upon crops.

This is best done by drains, open or covered, of greater or less depth, according to the amount of water and depth of soil affected by the flowage. Where no drains are constructed, care should be taken to plow deep, well-turned furrows, leading off all surface water into one general issue, rather than allow it to damage the whole crop. A few hours labor in cutting off the on-flow of water from such sources, will frequently pay as large a profit as the tillage of acres without such precaution. We desire merely to notice this matter, as to those interested it will at once commend itself as worthy of their attention.

Swine—The Suffolks.

Messrs. Tucker & Son—As you have requested correspondents to give their views on the subject of rearing and fattening of swine, proper age, &c., I will give my experience in that branch of farming. For the past few years I have been breeding Suffolks, and as the common complaint of their opposers, (or those that are opposed to introducing any improvements in swine,) is, that they are too small, and that they have no hair, and would freeze in the cold winters—it has been one object with me to do away with both these objections—by selecting for breeders only those that promise to obtain a larger size than the ordinary pig, and also with those that have the most hair, not however, so much for the purpose of keeping them warm in winter, as to protect them from the summer's sun. I have never had any difficulty in keeping them warm in winter, as a fat animal does not suffer from the cold as a lean one does, and all that are acquainted with them, will admit that they are easily kept in good condition. I think I have succeeded in rearing a large pig without losing his propensity to fatten, easily attaining 400 pounds at 15 to 18 months old, net. The one year old boar that took the first premium at the State Fair last fall, was bred by me. Also my experience teaches me that a Suffolk pig will attain a larger size by not being fed too high the first three months of his life; also that there is great danger of killing them if too highly fed before that age, and if they live they fail to be useful as breeders, from too much fat having accumulated on them, rendering them useless for that purpose. I have killed many a fine pig by feeding the sow too much the first six weeks of their lives, the pigs getting so fat that they choked up at two or three weeks old, and droop and die in a few days after. The first case that occurred with me was with a litter of twelve pigs, and I thought I would see what I could do with them; at two weeks old the difficulty began; they were pronounced the best pigs by some that saw them then, they had ever seen, but in a few days they were nearly half dead, and by reducing the keep of the sow I saved part of them. Have known whole litters of them lost in the same way; but with a scant diet for the first four weeks, have always succeeded in rearing from eight to ten to the litter, and two litters a year from a breeding sow. My experience with the Suffolk is, that with proper keeping both boar and sow, they are very prolific, but with too high keeping the litters are scant in number, and few live at that.

I think that farmers lose sight of the fact that an animal of good form, and light in the offal, whether neat cattle, horses, sheep, or swine, (and well kept in good condition,) are much better to withstand the cold than animals of contrary make; that is, with flabby sides, big legs, and coarse, large heads and horns, if of the neat cattle tribe. That animals of good form will keep in much better condition with the same keeping, I believe is universally admitted by all those that have given the subject attention.

If the above paragraph is correct, it is easy to see that the Suffolk pig will not be badly affected by the cold weather, as his offal is very light; and I think all must admit that it is correct, without regard to the different breeds, as all breeds have some poorer animals than others of the same breed.

We are a progressive people, Messrs. Editors, and I think the best cattle and pigs have not yet been bred. It therefore becomes us farmers to be on the alert, and see what we can do by way of improvement in all kinds of farm stock. I am very sorry to see so much apathy on the subject by many of our farmers, and I would like to see the native pig that *H.* tells of in your issue of the 20th Jan., that will compare with the poorest Suffolk I have on hand at the present time. I have never seen one, and I have been engaged in farming for more than one-quarter of a century. The subject is not exhausted, but this is of sufficient length for one paper. Perhaps I may resume it in a future number. Jonathan Talcott. *Rome, N. Y.*

Permanent Labels.

Eds. Co Gent.—Is not the following receipe for labels, the one referred to by you in your paper recently? If it is not, I propose it as a substitute for yours. I met with it some years ago, and have found it on trial just the thing for Permanent Labels:

Take of Verdigris and Sal Ammoniac each two drachms; Lampblack one drachm; water four ounces. Mix well in a mortar, adding the water gradually. Keep in a glass vial securely stopped. Write with the ink in a quill pen, upon clean, bright zinc plates of any desired form. When dry, it may be exposed to the weather, or buried in the ground for years, without obliterating the writing. Shake the ink well before using. C. G. Judd.

Steamed Brown Bread.

Recipe for making brown bread, which we think is a little extra, having used it in our family several years.

Take two quarts of sweet skim-milk, one tablespoonful of saleratus, one of salt, half a cup of molasses; put in equal quantities of rye and Indian meal, until the dough is as stiff as can be conveniently stirred with a spoon; then put it in two two-quart tins. Place sticks across the bottom of the kettle to keep the water from the bread; place one of the tins on these, and the other in a tin steamer placed on the top of the same kettle, and let it steam three hours. Care should be taken to keep the water boiling while the bread is cooking. When done, put it in a warm oven long enough to *dry* the top of it not *bake* it. Yeast can be used instead of saleratus, if any prefer it, but the bread must rise well before putting it in the kettle. Mellie.

Grapes from Eyes.

The *Gardener's Monthly* says the great secret of propagating grapes from eyes successfully, is not to keep them too warm at first after being cut for propagating, and recommends their being placed in a heap in a damp cool place in the propagating house, for a week, before placing them in the boxes. After potting keep them rather cool at first, and gradually increase the heat.

Change of Food for Stock.

The importance at all seasons, and especially in winter, of frequent changes in the food of stock, generally receives too little consideration by the farmer. As we gain more experience in wintering animals, we become more and more convinced that their health and strength are largely promoted by careful attention to this particular. Change of pasture in summer we have found beneficial in many ways, and a change of fodder in winter from one kind to another, seems to promote thrift by increasing the appetite, thus inducing a greater consumption of food and the better satisfaction of the animal.

On this point of *satisfaction*, Flint's "*Dairy Farming*" tells of a German agriculturist, who, after experimenting for several years on the feeding of cows, says he found "that to receive the full benefit of its food, the animal must be *wholly satisfied*"—fully fed until it desires nothing more. Nutrition to keep the animal growth and functions unimpaired, and bulk to fill the stomach, are requisite—these supplied, the animal ruminates at ease until the time arrives for its next supply. In our own case, of the forage provided, it is our object to induce our stock to consume all they will without waste—to fill themselves so that they are satisfied and at ease for the interval between each regular feeding. To this end, and within our limited reach, we find nothing better than frequent changes in the kind and quality of food—not following a regular rotation, but guided by the weather, and the changing tastes and appetites of our animals.

We have cornstalks, clover hay, timothy hay, and a mixture of the two—also red-top hay and a straw-stack. Bean straw is also included in our supply. A few roots were grown, and we have the usual coarse grains of the farm, as well as faith in the economy of feeding them, if occasion requires; but as yet, our fodder has sufficed to keep up the condition of our cattle and sheep, and the latter have considerably improved since brought to the yard. We had a quantity of pumpkins, but they are now all consumed. An occasional feed of roots or a slop of bran or mixed meal, will take their place, particularly with the milch cows.

Twice a day is a sufficient number of times for giving out cornstalks to cattle. Hay of different kinds is given once or twice; occasionally it is brined—in that case we use some cut two years ago, and of an inferior quality. If they do not fully consume any feed given out, we change it for less of something more palatable—keeping in view economical consumption of fodder as well as thrift of stock. Sometimes they seem less hungry than at others—then it is needful to give less—and it will give profitable exercise to the judgment of any attentive, observing farmer, to take the personal oversight of these things.

Sheep are benefited by change of food as much or more than cattle. Clover hay is one of the best liked feeds we can supply, but they eat this, even, with a better relish after a meal of bean straw, of red-top hay, or a run with cows on cornstalks. For wheat and oat straw and chaff, as a change, they seem to have an especial liking, and we believe it will be found profitable to provide all the above, and good places to feed them out, both for the thrift of your flocks and the true economy of bringing them through the winter. So our experience teaches us.

Many points connected with the above, might have been remarked upon, but we like always to "stick to our text," and that regards, mainly, changing the feed of stock.

Share's Hoeing and Hilling Machine.

As it is a matter of considerable importance that farmers communicate the results of their experience through the columns of Agricultural papers, I would say that no implement of husbandry that has come to my knowledge, is better adapted to answer the purpose for which it is designed, than *Share's Hoeing and Hilling Machine*. It saves the labor of three hands at least, and performs the work in a more neat and uniform manner than is usually done by the hand hoe. We run the machine between the rows, once each way, within about four inches of the hills, leaving a space of about eight inches square to be cultivated if grassy, by the hand hoe, and in hilling, spread the wings so as to shave the soil in a very handsome manner around each hill to any required depth. It is much less liable to injure a hill of corn or potatoes, or any hoed crop, by covering or throwing stones on them, than the plow, as from the peculiar construction of the wings, stones are inclined to roll back into the furrow, when the plow is liable to throw them over and cover up or break down the hill.

How it will succeed in eradicating the Canada thistle, I do not know, but it is *death* on quack, white clover, daisies and sorrel, cutting up the small fibres in such a manner as to leave nothing from which vegetation can again start. In short, I conceive the plan of the machine to be "just the thing." I have much more to say with regard to the introduction of improved implements of husbandry in this region, but must defer any further remarks until another time. G. W. Durant. *Rensselaerville.*

Sorghum Syrup and Sugar.

There was over 2000 gallons of the Sorghum syrup made in this township the last season, and most of it, where the cane was sufficiently matured and properly manufactured, was of an excellent quality—far superior to any boughten molasses, not even the celebrated Boston syrup excepted. At different times, small quantities of well crystalized sugar were made from the best matured cane. There will be any quantity of cane raised next year. N. Case. *Bury Hill, O.*

Messrs. Eds.—I tried the Chinese Sugar Cane in 1857. I made some five gallons molasses of passable quality.—I think the subject deserves the attention of Agricultural Societies. They should get up the best mills for crushing the cane and let them out to farmers who will raise the cane, charging a moderate hire, and give the instructions how to make the best syrup. I made a very small quantity of syrup by squeezing or twisting the canes over a dish with the hands, and boiling the juice in a tin cup (without any alkali,) on a stove. The syrup was far superior to any I ever saw. It was in appearance and consistence like castor oil, and in taste like the syrup of pear preserves.

In the fall of 1857, I tried to procure the bi-sulphite of lime, in the city of Baltimore, without success. I was told it was always made to order. I substituted chloride of lime or bleaching powders. My molasses was free from acid, but was injured by being boiled in a thin copper kettle, the splashing up the sides of which burned and colored the molasses. Too much care cannot be taken to prevent burning. W. C. H. *Frederick, Md.*

Warts on Horses.

Messrs. Editors—Having seen an inquiry in your paper for something to cure warts, please insert the following:

The most certain remedy is to cut the wart off close to the skin, and then apply a red hot iron to the root. If very small, they may be removed by the application of lunar caustic to the root after having been cut off. This is a certain cure if it is thoroughly performed. A Lover of Good Horses.

Management of Manure.

We have often had occasion to urge the importance of the thorough intermixture of manure with the soil. One of the chief reasons why fermented manure so often proves superior to unfermented is the facility with which it may be pulverized while working in by plowing and harrowing. Repeated experiments with fresh manure, made by plowing it under in the usual way, in one instance, and by thoroughly grinding it into the the soil by means of what is termed a *drag roller*, in another; have shown the beneficial effects of the latter treatment on the crop to be more than double the former. In corroboration of these views we condense into a brief form the statement of an experiment reported by H. C. White of Barre, Vt., in the New England Farmer. He cuts all kind of fodder except hay before feeding, which causes all his manure to be short and easily spread and intermixed with the soil. He breaks up his green sward eight or ten inches deep, late in autumn; in the spring the sod is rolled, and the fresh short manure is drawn out and spread upon it at the rate of fifteen to eighteen cords per acre. It is thoroughly mixed with the soil by the harrow or cultivator, and just before planting it is plowed three to five inches deep and harrowed again. This treatment has given, for the last three years, 60 to 70 bushels of corn per acre. The success is attributed no doubt justly to the thorough mixture of manure and soil, the product of corn, oats, potatoes and hay being about double the amount "under the old system."

How to Raise Early Potatoes.

Messrs. L. Tucker & Son—As I have never seen the plan, adopted here, in raising early potatoes, mentioned in any Agricultural paper, I herewith give it. About six weeks previous to the usual time of planting in the open ground, mark out a piece, say five or six feet wide, and as long as required, on a dry and sheltered piece of land; dig out the surface to a depth of five or six inches; place boards around, to keep up the loam or sand; then fill to the depth of six inches, with horse or some manure which has been thrown over to produce heat; tread it down lightly, as for a hot-bed, and cover the manure with four inches of loam. I keep some in my barn cellar through the winter, to be ready at any time. It is also well to keep the ground covered through the winter, where the bed is to be made, with straw or something to keep out the frost. Then pack your potatoes as close as you can, over the surface, a single thickness; cover with four inches of loam, or what is better, sand, as the sprouts are tougher and do not separate so easily from the potato in lifting. I cut my potatoes a day or even weeks before, and place them cut side down. At night cover with straw or coarse hay; in the morning, if mild, and no rain, rake off the covering and replace at night. In case of continued dry weather a slight watering may be of service, though seldom necessary. When the time for planting arrives, land manured and furrowed, take up the front board, and with a dung-fork lift as many as it will hold; give them a shake, and separate each plant carefully by hand, placing them in a basket or box; then drop them, either for hills or in rows, and have a person follow to cover as fast as possible, placing an inch or two of earth over the tops, through which they will break in a few hours.

If planting has been delayed from any cause, and the plants should have attained considerable growth, (I have planted them when a foot high and had them do well,) lay them down and cover as above. If your field is not too far from your dwelling, make the bed there, as it saves exposure in carrying the plants to a distance. With a few boards and stakes a shelter can be made to keep off the cold winds.

By sprouting potatoes in this way you can have them ready to dig at least three weeks earlier. A Jamaica Plain Farmer. *Mass.*

The Best Time to Sow Peas.

Eds. of the Co. Gent.—Your correspondent G. Butts, in your paper of the 16th, asks the question referred to in the caption above.

1. I have raised many peas, of many sorts, for market, both in garden and field culture. Those sowed early have, with great uniformity, produced the best crops. Peas sowed late are injured by dry, hot weather, and almost always mould more or less, and so produce a lighter crop. The cold freezing weather that often occurs in April and early May, does not injure peas once in ten years.

2. The pea-bug—alas, I know of no certain means of resisting this almost omnipotent enemy. The assertion that he may be avoided by very early sowing, is simply not true. It would seem that the pea-bug finds other places for the deposit of his eggs, in the absence of the pea-pod. Hence it is that clean seed, sown on soil where peas have not recently been grown, does not avoid him. The pea-bug, however, may always be cheaply and thoroughly expelled from the seed you are about to sow. Let your seed be well dried in the fall, and put up in close vessels. When you are about to sow them, turn them into a tub of water, when you can readily skim off and destroy every bug. Thus you will somewhat diminish your enemy. I do not esteem the presence of the bug in peas so great an evil as some other persons do. As the bug always deposits its egg in the side of the pod, and not in the edge, so the germ of the seed is rarely injured by it. True, the amount of food furnished by the body of the seed, is diminished just in proportion to the amount eaten away by the bug; but this is usually so small in proportion, as to make no great difference in its strength of early growth. For the table, the injury by the bug is small. The green pea, as shelled for the table, contains but the egg, and so is not greatly injured. To those who cook the pea as a winter food, and those dishonest persons who purchase (as many do,) and mix it with coffee, the presence of the bug is a serious drawback. C. E. Goodrich. *Utica.*

Value of Coal Ashes.

Editors Cult. and Co. Gent.—The question is frequently asked, are coal ashes good for anything for manurial purposes? to which I can answer, yes. I have used them more or less for the last twenty years—the anthracite for the most time, in Rhode Island, and the bituminous here in Ohio for the last four years, and I should as soon think of throwing away my wood ashes as my coal ashes. To tell you when and how I have employed them with benefit, would lengthen out this communication beyond the limits of the patience of your readers; suffice it to say that as an absorbent for highly ammoniacal manures, I think them invaluable. I have also found them very valuable in rendering a stiff soil light and porous, and a light sandy soil compact. I have a piece of ground which four years ago was a coarse yellow sand; by composting my hen manure with coal ashes, the sweepings of the wood-house, the grass and weeds of the yard and garden, and the slop from the chambers, the soil is getting quite dark and compact, and I have been enabled to get the same crops off the same ground year after year. Indeed such sweet corn and cabbages as I have had year after year, would be hard to beat. In the Cultivator for April, 1851, you will find an analysis of the red and white anthracite coal ashes, by which it will be seen that the insoluble matter is 88-85 per cent. Now if you have the Transactions of the New-York State Agricultural Society by you, you will find by turning to one of the volumes about the year 1846, (as it is many years since I saw it, I cannot tell exactly,) an analysis showing that from 38 to 42 per cent, or nearly one-half of the amount of insoluble matter is alumina, a greater proportion than most clays possess; it is therefore more valuable than clay as an absorbent, because while it will fix more ammonia, it is less adhesive. c.

P. S. I wish you would publish the analysis from the New-York Report, and also if you can find it, the analysis of the ash of the bituminous coal, mentioned by Prof. Norton on page 137 of the Cultivator for 1851. We have a great variety of bituminous coals here in the west. I have heard that soap has been made from some of them. How and where shall we get an analysis of them. c. *Cleveland, O.*

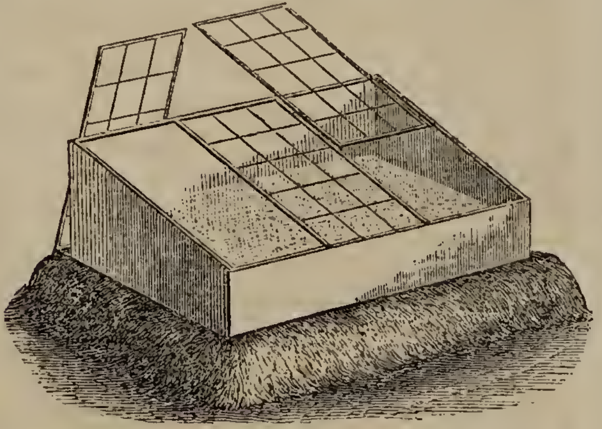
N. B. To get the full benefit from coal ashes as an absorbent and deodorizer, they should be used fresh or kept dry.

Formation of a Hot Bed

Taking into account the rapidity with which the summer succeeds spring, and how tardy the advent of spring seems to be, any means by which we can advance vegetation a step, should be adopted, if not involving an undue expenditure. The hot-bed is a simple and economical method of promoting the early vegetation of choice seeds, of esculents, &c., so that by the time the severe frosts have disappeared, we may transfer to the garden our plants partly established. The flower garden may be spared a small corner of the hot-bed also, for the raising of a few choice annuals, of which we shall speak in another place.

The expense of constructing or getting up this hot-bed frame is not overwhelming, though plans have been proposed to cheapen the luxury still more. A frame of three lights or sashes will be found sufficient for a small garden. It is formed of a frame or box about six feet wide by twelve feet long, with sloping sides and a higher board at the back, which is to be placed to the north, with cross bars, to be fastened by hooks and staples, as this proves the most convenient method of removal; these cross bars support the sashes. The sashes are generally glazed with six by eight inch glass. Any person may thus compute the probable cost of such a frame in his own vicinity, requiring boards for the frame, cross bars, and three sashes six feet long by three feet eight inches wide, allowing four inches for each sash to rest and the cross bars.

The material to create the bottom heat is the next consideration. This must be long stable litter, which, if of the right quality, may be mixed with a portion of leaves from the wood. The litter should be laid in a heap for some days before use, in order to allow it to commence heating. About four waggon loads will be sufficient. The ground for the frame having been selected, sheltered if possible on the north, and well exposed on the south-east, throw out a shallow trench, and lay the soil taken out in a ridge along the margin of the intended bed; this forms a sort of base to prevent the litter from being scattered about. Then shake the litter regularly in layers, beating it gently with the back of the fork as you proceed, to consolidate it; if leaves are used, lay them in alternate layers; too great a layer of leaves would prevent fermentation from going on as rapidly as desirable. The heap should have a gentle slope from back to front, and should be, when formed, about three and a half or four feet high at back, and three in front; it will gradually subside. On this heap lay the frame; the manure should be allowed to extend about a foot beyond the frame on all sides, as shown in the annexed cut. Keep the sashes close, and covered with mats, for two or three days, till the heat arises, and when fully up, cover with six inches of light loam and leaf mold of the richest quality which should be carefully selected.



When the heat comes up, a little air is required, and space to permit the escape of steam, by tilting up the sash. In a few days the heat will moderate, when seeds may be sown, either in small compartments in the top-dressing of soil, or in boxes or pans, slightly "*plunged*," as we term it, in the bed. The only danger is from the generation of too violent a heat, and the prevalence of steam from the fermenting materials. Tan-bark has been successfully used to cover with, as this keeps the steam from rising; this cannot be employed where seeds are sown in rows, without the use of boxes or pans. We have perhaps devoted an undue space to the method of preparing a hot-bed. We sincerely hope that even one individual may be benefitted by the details of what is to many a thrice told tale.

To Make Turtle Bean Soup.

Eds. Co. Gent.:—My family have enjoyed Turtle Bean Soup so much that I send you a receipt for making it. Yours, &c., I. S. C.

Get a piece of good beef,
Of a butcher or thief,
Which boil in five quarts of water;
Add beans, just one quart,
Of the genuine sort,
And 'twill make you good soup—*or it ought to.*

Soak the beans over night
Or you'll find their skins tight.
When press through a course wire sieve;
Boil four or five hours
And then by the powers
Some fat on the top you'll perceive.

If the lady who cooks
Has studied her books,
She'll know how to skim off the fat;
Add in the season,
To the best of her reason,
If she don't, 'twill surely taste flat.

Let it go back to pot,
To make it quite hot,
Half an hour or so before dinner;
A lemon then slice,
You'll find very nice,
And you've soup for a saint or a sinner.

Lindenwood, N. J.

Temperature of Cream for Churning.

Messrs. Editors—As I am a reader of the Country Gentleman, I wish to say something in regard to churning cream for butter. As to the temperature at which the churning should be done, in the statements which I have read, some have thought the finger and others the thermometer, was the best way to test the proper warmth of cream for churning. To say that the temperature should be between fifty-five and sixty, as some have said, or between sixty and sixty-five degrees, as others have said, is very indefinite. I think there is a degree exactly right, at which butter will separate from the milk and gather quickly, without being too soft, and that I have fixed in my own mind, by my own experience, at sixty-five degrees. In the summer season, when the atmosphere is warmer than the cream, I want it to be at sixty-three degrees at the commencement of churning, and if the cream is in good condition it will bring butter in about twenty minutes. Cream that is warmer than sixty-five degrees will make butter too soft; and any temperature that is below sixty-three until it comes to sixty, will increase the time of churning about five minutes for each degree; and when it is below sixty, it will lengthen the time of churning about ten minutes for every degree until fifty-five, when I hardly believe it will come at all.

As for using my finger to determine the warmth. I would as lief depend on using my finger to tell when the atmosphere was below zero. J. R. D. *Cherry Valley.*

Artichokes as Stock Feed.

Mr. Kathbone of Marietta, O., writes to the *Ohio Farmer* in regard to a crop of artichokes raised by himself: "In March and April, I fed a great portion of my crop. My horses would leave corn to take a supply of artichokes. My cattle are also extremely fond of them. The fact is, that there is no root crop to my knowledge, that can be raised as *stock feed* to so much profit. They can be produced at a cost of from five to ten cents a bushel."

Seeding-Down on Oats vs. Wheat.

It is the generally received opinion that wheat is a better crop to seed down to grass than oats, and our own experience has favored this view. G. E. Brackett of Belfast, Me., writes the *Genesee Farmer* that, "in a field, the whole of which received the same amount of manure, and the same treatment, one portion was seeded in wheat and the other in oats. On the former, the crop of grass fell short the past season, and it requires breaking again; while the latter yielded an average crop."

Plowing.

The manner in which many farmers plow their ground for their hoed and grain crops, would naturally lead to the conclusion that they thought the thorough inverting and pulverization of the soil by the plow, harrow, &c., preparatory to planting or sowing the seed, was a matter of little consequence; consequently they practice the cut and cover system, as though the sooner they got over their fields with the plow the better.

The greater or less cost of labor, in the culture of hoed crops, depends very much upon the manner in which the land has been plowed.

Different kinds of soils require differently constructed plows. We have never yet seen the plow adapted or constructed so as to make the best kind of work on all soils. A good green-sward plow requires a differently constructed mould-board from that of the stubble-plow. Some soils require, for efficient work, a heavy plow and a strong team. On other soils, a much lighter plow and less team will do the work equally well, and at a much less cost. Farmers differ very much in their views as to how green-sward should be plowed; whether the furrow slice should be completely inverted, or left at an angle of forty-five degrees, the furrows partially lapping. Says an English practical farmer,

"The true and correct practice in plowing, as ascertained by long experience, is to lay the furrow slices at an angle of forty-five degrees—that is, the furrow must be about one-third more in width than in depth—or as six inches to nine, or seven inches to ten, &c., &c. It is thus that the greatest amount of soil is exposed to weathering influences; besides, in this way it must, if properly done, lie close; no hollows, no "hog troughs," but one uniform series of furrows, in the best position for the harrow to work with the greatest effect and usefulness, and thus the most readily to secure the disintegration of ammonia and its subsequent deposit. Good plowing, then, exposes the most surface to the air; it provides best for subsequent harrowing, and also prepares it, when well broken down, for better and more consistent consolidation, so that no hollows supervene between the surface and furrow sole. These important ends are requisite for the best sustenance of nearly every crop."

Lapping the furrows as above described, is advocated by some farmers, while others as strongly advocate the most complete inversion and shutting in of the furrow slice. On heavy clayey or naturally moist loamy soils, the angle turned, or lap-furrow, may prove the better method of plowing. But we think a large portion of our farmers prefer a plow that will completely turn the furrow "down side up," and put the grass, stubble, &c., out of sight.

On light, sandy, and gravelly soils, in sections of the country where the crops are liable to suffer from late summer drouths, we think the flat furrow system best. Where the sod of a grass field has been turned over flat, the buried stubble and vegetable matter in course of the summer becomes a spongy mass, absorbing and retaining the moisture that rises from the subsoil; this moisture hastens the decomposition of the vegetable matter of the sod, and at the same time very much arrests the bad effects of the drouth—as the moisture does not readily ascend to the surface of the field and escape into the air, as would be the case if the plowing had been badly performed, and much of the turf torn up by the harrow, as is sometimes the case.

The difference in soils, seasons, manuring, &c., is so great, that it would be idle to lay down any specific rule that would apply in all cases, as to the angle at which the furrow slice should be turned, or to what depth the plow should penetrate. Long years of practice will confirm one farmer in the belief, that plowing to the depth of four or five inches will give him the largest and most profitable crop of corn. While another, with a strong team, and the largest sized double or Michigan plow, will turn up his broad acres twelve inches deep, and sixteen-inch wide furrows; he is confident that he gets larger crops of corn, and better grain and grass crops. Other farmers practice plowing a medium depth between these wide extremes, and are satisfied with the results—and they seldom vary in their usual routine of farming. A greater depth of plowing than has been practiced by many farmers, would doubtless prove advantageous; this, however, depends much upon the nature of the subsoil. Such is the cold, acid, irony nature of some subsoils, that if two or three inches of them were turned up at one plowing, it would result in great injury to the crops for several years, unless heavy dressings of lime and manure were applied. Carefully conducted experiments in these matters, are safer guides than any theory not founded on the results of varied practice.

Draining Plow.

The Country Gentleman of 25th last November has just fallen into my hands, and your article on Cost of Cutting Drains, &c., pleased me greatly. When at your office last summer, I inquired for the Ditching Machine of Pratt & Brother, intending to see, if possible, its practical operation; but it was not to be found.

Your improvement is very important. Will you be so kind as to state for the information of your readers generally, as well as your humble servant, the "peculiar construction" of the plow, &c., more fully—or if this does not suit to do, if it will be for sale at Albany next summer. It should be for sale, and introduced as one of the most important labor-saving machines. A. BERRY. *Raymond, Miss.*

The ditching machine of Pratt & Brother, although an ingenious invention, and promising highly at first, was found on account of its great weight and complexity, to be very liable to get out of order and also very difficult to manage. We have given it a thorough trial on different soils and on different places, but on the long run, we found its use impracticable. As a consequence, it is no longer manufactured. The ditching plow, on the other hand, is remarkable for its simplicity, and with reasonable care, never gets out of order. A neighbor who had used Pratt's machine and thought it valuable, has since cut several miles of three feet drains, with a draining plow, and regards it as "incomparably better."

We intend at some future time to give a full description of the draining plow, with its various modifications and improvements, but are not prepared to do so at present. Our correspondent will find by referring to our advertising columns the particulars in relation to its place of manufacture and sale, &c.

Shoeing Horses that Overreach.

But few blacksmiths seem willing to learn anything new about horse-shoeing, or will admit that there is any *need* of it. But while they know no better plan to remedying over-reaching than making the shoes shorter, and placing the forward one on the toe and the hinder one on the heel of the horse, they need to understand that there is a better way, and the horse owners should make them practice it. E. L. Gibbs directs as follows in the *Ohio Cultivator:* "Make the forward shoes long, and the toe-calks short and standing a little under, and then set them as far back as convenient, in order to let the feet roll over as soon as possible to get out of the way. And in setting the shoes on the hind feet, reverse the order to keep them back, to give time for the forward feet to get out of the way. Make the toe-calks high and the heel-calks low, to keep the feet back, and then he will travel like other horses. This may be remedied in part in the mode of paring the hoof. This is essential in all cases, and where too many horses have been made cripples."

Sugar Cane for Fodder.

Many farmers who have raised the Chinese sugar cane for fodder have but partially succeeded in its use. It answers well for soiling in the fall, when taken just at the right time, or a short time before the seed ripens. At this period, its juice has become sweet and nutritive, and the stalks being soft and juicy, cattle eat the whole with avidity. But this period is of comparatively short duration—and does not continue so long as with the stalks of common Indian corn. After cold weather sets in, the sugar cane stalks become drier and harder, the sweetness is diminished, and they are not eaten. The expedient adopted with common corn, of sowing thickly so as to cause the stalks to grow small and tender, does not answer well with the sugar cane, the leading stalks outstripping the rest, and nearly preventing the smaller ones from growing at all. Yet, notwithstanding these difficulties, many are unwilling to relinquish the sugar cane, for it not only produces double the amount of stalks afforded by common corn, or ten or twelve tons per acre, but the seed being so much smaller, but little in quantity is required for seed, while less than three bushels of corn per acre will not give a full crop of stalks.

We have found a complete solution of the difficulty in the use of the cane in winter, in *Hickok's Stalk Cutter and Grinder*, noticed a few weeks since in this journal. It cuts the stalks and tears the chips to fragments with great rapidity, after which the cattle eat every portion freely. Although but a few days have elapsed since the feeding was commenced, the cows have sensibly increased in milk, from the sugary food thus supplied them. We intend as soon as opportunity presents, to procure accurately measured results from different kinds of food. The enormous productiveness of the cane, gives it a great advantage over any other kind of cattle fodder, as a single acre might be made to feed half a dozen cattle through winter, while the expense of raising it is but trifling, if the seed are sowed by a drill, and the crop cultivated by a horse. The cost we think need not exceed one dollar a ton. Could it be generally adopted as a fodder crop, it would greatly lessen the required extent of meadows, admit an increase of live stock on every farm, thus affording a larger supply of manure, and increase both the extent and acreable product of other crops.

Whale-Oil Soap for the Curculio.

MESSRS. EDITORS—I last season tried an experiment with the curculio, which I have never seen published, and it may be of some service to your readers. I have four as fine and thrifty plum trees as I ever saw. They have yearly been filled with fruit, but I have never ripened a single plum on either tree, until the last season. Having a number of rose bushes on which I was frequently using whale-oil soap, to kill the green-fly, slug, &c., I concluded to try the same on the plum. One of my trees branches from near the root in three branches, all about of the same size, and were all equally filled with fruit. On one of these branches I used the whale-oil soap, putting it on with a hand syringe, and covering thoroughly the whole of that part of the tree. This was done as often as three or four times a week, and oftener in case of rain. The part of the tree so treated, was loaded with fruit, and ripened them all; it was so full as to require support to keep from breaking. The other parts of the tree did not ripen a single plum. The other trees were jarred daily, night and morning, but I did not get a plum from either of them. This, to me, for a single experiment, was very satisfactory. I intend trying it more extensively next spring.

About one pound of the soap was used to eight gallons of water. D. B. LOGAN. *Morristown, N. J.*

Strawberries—Peaches.

MESSRS. EDS —Can you inform me through the columns of THE CULTIVATOR, whether I can get strawberry plants in good order for Spring planting, from Albany—I mean will they bear shipment so far? (1.) How far can the *berries* be sent by railroad in good order for market, and how should they be put up? (2.)

I see it stated that peaches are damaged a good deal by the curculio in some sections. Is the remedy same as for plums? (3.) Would peaches be more likely to be attacked by the curculio if plums were planted in close proximity, or would it be a protection? (4.) WM D. CLARK.

1. Strawberry plants may be safely sent the distance indicated, if properly packed, or so that they may have air. Sacking is therefore better than tight boxes. Early in spring, before hot weather, they may be sent further than afterwards. 2. The berries are packed in small, circular, rather flat wooden boxes, so as not to crush each other. Many of these small boxes are then enclosed in a larger box. Strawberries are sometimes sent by railroad a hundred miles or more, but they are not so perfect on arrival as when fresh. Shorter distances are preferable. They should always be disposed of within a few hours of gathering, as they soon lose their freshness and fine flavor. 3. It is 4. Avoid every thing tending to increase or call them in—killing, in its different forms, is the only satisfactory remedy.

Cheap Hot-Beds.

The time is pretty near at hand for this work again. How many there are who neglect this useful adjunct to a country home. "Too far away from town—can't get glass," says one—"can't afford it," says another. Very well, here is something cheap enough, and easy enough; yet it will do, we feel very certain. It is from a correspondent of the *Valley Farmer:*

"My framrs are about six feet wide, by sixteen feet long, or just wide enough so that two widths of domestic will cover it, which are sewed together. Have cross-ties on top. just the same as for glass, say every four feet one cross-tic, to hold the frames secure, and keep up the canvass, which is tacked to one by three stuff the length of the frames, the same being a little wider than the frames and allowed to hang over all round. I wished to enlarge my forcing-beds last winter, and happened to try canvass. I prefer it to glass, being cheaper, and easier to handle, and does not break so readily. I shall still enlarge this winter. I give air by raising the lower edge; but it would be better to give air at the upper edge, which I shall try this winter. I did not commence my beds last season until the last of February, but this year I shall commence in January, and believe, by letting the air out at the top, I can start just as early as I could with glass, and have my plants as hardy, and with less attention, than to have glass. I put the oil on the domestic cold; perhaps it might be better to put it on warm. I will try it this season, as I think it will go further, but cold will do. I used linseed oil, and put it on with a paint brush."

March would be quite early enough for northern latitudes. Only fancy what a lot of plants of cabbage, tomato, &c., such a frame would furnish. E. SANDERS.

☞ There are few County or District Ag. Societies, that publish as large and useful volumes of Transactions, as that of Essex Co., Mass., for a copy of which for 1858, J. W. PROCTOR will please accept our thanks.

Plan for a Kitchen Garden.

It is a very simple matter to divide the space to be devoted to the culture of esculents, if we make up our mind to pursue a regular system of cropping it. To effect this, we must reflect a little, and compute how much space can be safely appropriated to each item, allotting to the greatest favorites the most extensive compartments. Each family must determine this question for itself, as each has its peculiar tastes and preferences. One eschews cabbages, alleging that the perfume when cooking is very insinuating; another cannot use the parsnip; a third would devote a very large proportion to tomatoes; a fourth loves onions, and a fifth and sixth may differ from all these. Almost all choose LIMA BEANS, GREEN PEAS, and SNAP SHORTS, while early in spring a dish of ASPARAGUS or a choice Rhubarb pie, is seldom pushed aside by the most fastidious. Many of our readers, we presume, go in for every nutritive esculent in the catalogue. So decide for yourself, measure your ground, and the list will be furnished you of select sorts. We recommend order also, in the style and arrangement even of the *Vegetable Garden*. We would have the country gentleman and farmer keep their esculent garden so neat, that it might serve the cook and housekeeper, or any other domestic who may have no peculiar taste for flowers, for their flower garden. We trust there are few such, however, though we confess to having frequently heard individuals exclaim, that the "choicest flower for them was a potato blossom or a pea bloom."

We would also decide at the commencement of the season, upon the location, for at least the main crops, if not all the vegetables intended to be cultivated, as well as the successional crops to follow these; and to secure this system, we should lay out the space into four or six principal plots or compartments—we shall say four at present. These may be of any extent, from one rood to an acre. They may even be so limited, as not to exceed a rod each; the plan may be carried out all the same. The ground appropriated, if very irregular, should be reduced to the form of a parallelogram—the square is the most convenient, cutting off by a walk the irregular portion, which may be divided off into beds of various sizes, for miscellaneous articles and small fruits, such as strawberries, &c. The chief object is to secure four equal squares of ground, for the prominent crops. To make ourselves understood, we annex a diagram representing a regular piece of ground, divided in the manner indicated—(Fig. 1.) The method of cropping it, we shall explain as we proceed. We have not drawn it to any scale—the same plan would be equally appropriate for one rod or an acre. Various other regular divisions might be substituted; we have chosen the above as the most simple. The entrance is at E, and a border surrounds the entire space, leaving four allotments with the necessary passages.

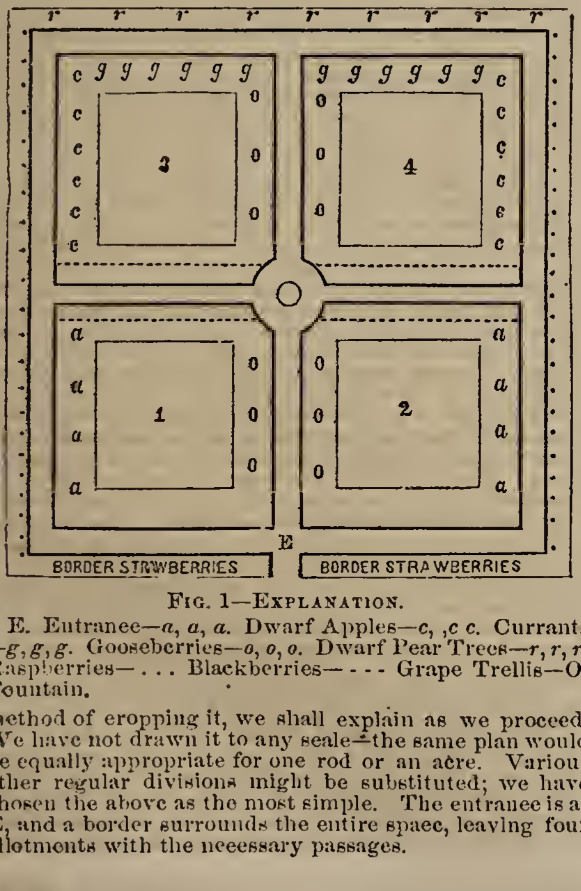


FIG. 1—EXPLANATION.

E. Entrance—*a, a, a.* Dwarf Apples—*c, ,c c.* Currants—*g, g, g.* Gooseberries—*o, o, o.* Dwarf Pear Trees—*r, r, r.* Raspberries— . . . Blackberries— - - - Grape Trellis—O. Fountain.

Potato Culture—One-Eye System.

MESSRS. EDS.—I wish to add my testimony in favor of the one-eye system of cultivating potatoes. Not having much confidence in the plan—I tried it on a small scale, planting *one peck* of very small "Mountain Junes," the largest not larger than a hen's egg. Cut in very small pieces, one eye to each piece. Planted in drills, dropping them six to ten inches apart. I did not expect much from them, but was greatly disappointed. You should have seen them roll out—great big fellows—many of them the size of a man's double fist. In the same ground, side by side; were common reds, in hills, one potato in each hill—produced very small tubers, though there were a good many of them, yet the yield did not compare with the others. "Well," said a brother farmer who saw them dug, "its a knock down argument." I intend to try it in field culture this year. OWASCO.

MESSRS. EDITORS—As one who finds profit in the weekly perusal of your valuable paper, I wish to thank you for your method of diffusing information among your numerous readers. It is practical information that we farmers need, and those who are not mortgaged to the past, may find it to their advantage to give up some "old fogy" plans of cultivation, and adopt the practice of others, whose plans, with the results, are so freely discussed in the columns of your paper.

I have a number of reasons for favoring Mr. HOWATT'S plan of raising potatoes. First, there is economy in seed—second, economy in labor—third, I have obtained a better crop, and of more uniform size.

I raise the "Davis Seedling"—cut my potatoes, having two or more eyes to a sett—drop them fifteen inches apart in the drill, and cover with a plow, leaving the field in ridges for ten or twelve days; then cross-harrow, making it level.

At the first hoeing I use a cultivator, at the second a double mould-board plow, and make clean cultivation. At this hoeing, sowed turnips and obtained a fine crop.

I harvested more potatoes and of a more uniform size, (there being comparatively no small ones among them,) than I ever have before.

I make this statement to offset a Kansas failure, hoping it may encourage some others to try this system, and give us their experience. M. C. W. *Lincoln, Mass.*

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Scab or Itch in Sheep.

We should judge from the description given us by our correspondent in Fayette County, Pa., that his sheep are affected with the scab. We have inserted his inquiry in its appropriate place; and while waiting to hear from our readers, we give what Dr. Dadd says upon the management of this disease in his Cattle Doctor:

Scab, Itch, erysipelas, &c., all come under the head of cutaneous diseases, and require nearly the same general treatment. The following compound may be depended on as a safe and efficient remedy in either of the above diseases:—

Sulphur,	2 ounces.
Powdered sassafras,	1 ounce.

Honey, sufficient to amalgamate the above. Dose, a table spoonful every morning. To prevent the sheep from rubbing themselves, apply

Pyroligneous acid,	1 gill.
Water,	1 quart.

Mix, and wet the parts with a sponge.

Whenever the scab makes its appearance, the whole flock should be examined, and every one having the least abrasion or eruption of the skin should be put under medical treatment.

In most cases, itch is the result of infection. A single sheep infected with it is sufficient to infect a whole flock. If a few applications of the pyroligneous wash, aided by the medicine, are not sufficient to remove the malady, then recourse must be had to the following:—

Fir balsam,	half a pint
Sulphur,	1 ounce.

Mix. Anoint the sores daily.

Extraordinary Improvement upon a Small Farm.

MESSRS. EDITORS—There is an instance of farm improvement in this town, three miles from my residence, that justly deserves to be known to all appreciators and lovers of Agricultural advancement. I visited that farm last July, and was so struck with its altered appearance from that of former years, that I requested permission of its owner Mr. NATHANIEL SPAULDING, to make a statement in writing to some Agricultural paper, of the ways and means he had adopted and pursued to make such a distinguished mark in so few years—not only in the change and improvement of the soil, rendering valuable and fertile, what, a few years ago was comparatively of but little value and almost barren, but the change in the buildings, in the general aspect of the place—now comely, convenient and beautiful, where but a few years since it was the picture of desolation, uninviting in the extreme.

Mr. Spaulding assented to my request, and gave me a brief account of his operations, and though a sensible and modest man, appeared proud of his skill and success ; and justly so, for he has certainly shown himself a benefactor to his race, for he has made more than one hundred spears of grass grow where none grew before ; and if his example has the effect to arrest the attention and stimulate to exertion even *one* individual to do likewise on similar soils (there are enough of them in all parts of our country) it will be ample remuneration both to the author of these improvements and to the narator of the facts, and we hope also to you, Messrs. Editors, for the trouble of publishing them to your readers.

This farm consists of twenty five acres. brook meadow, of clayey soil ; some part of it approaching to swamp muck ; and 17 acres upland, of cobble stone surface, in wood and pasture,—42 acres in all. Mr. S. informed me that he bought it at auction, and moved on to it in 1853—price $460. "An old shell of a house and barn," (to use his own expression,) was then upon it, "and some parts of the meadow so wet that a team could not be driven over it to get what little poor hay grew upon it" There was but little of it that could be plowed to advantage. From eight to ten tons water grass of poor quality was the product of the first year's hay crop. Mr. S. says he has made over 600 rods of drain. Main ditches, three feet wide, and from three to six feet deep ; the bottom of the drains are boards ; space 12 inches square, covered with flat stones. with shavings from the lumber with which he was erecting new buildings, and hemlock brush, thrown into the drain upon the covering stone, and then filled with earth. The cost of these main ditches averages 62½ cents per rod. His cross drains leading into the main ones, are four rods apart, 15 inches wide, stones (cobbles) thrown in loose, covered with brush, and filled with earth. The cost of these cross drains 30 cents per rod.

Mr. S. thinks the increase of production for the two years following the draining, paid the whole expense of making these drains. He is undoubtedly correct in his estimates, for this work was performed by himself and boys. Had he employed other labor, or contracted it out, at the high prices farm labor has commanded of late, it would hardly have done it ; but he is a man that never puts his hand to the plow and looks back. He is emphatically a practical man, carrying out whatever he undertakes with an energy and skill known to those only of like determination. Above these drains where clover and timothy now grow so heavy as to lodge, a poor miserable water grass grew, scarcely worth the cutting and housing.

Mr. S. says the production of these 25 acres in 1857, only four years from the time he commenced on the farm, was 30 tons English hay, 350 bushels of corn, and 250 bushels oats. And this from a soil, though not exhausted, but so located as to be kept saturated and filled with cold spring water, to such a degree as to discourage and forbid cultivation only on the dryest parts and in the dryest seasons.

Those skeleton buildings, or mere apologies for house and barn of which Mr. S. speaks, have given place to a convenient and commodious stone house of permanent durability, three barns, with cellars under them, and other out-houses sufficient for every convenience, forming a group of farm buildings for durability and beauty not often surpassed in our rural districts. And all this is the work of one man and his family, in less than six years ; for I think but little has been paid for labor, and that little to carpenters and joiners.

The value of this little farm has nearly increased to ten fold in the hands of its present owner ; and such an example cannot but have its effect in its immediate locality. Already the contagion is caught and some of his neighbors are beginning to construct drains. Tiles are now made here and find a ready sale. The reclaiming of wet lands and bringing them into fertility has been proved to be a paying investment ; and thousands of acres in New England, now worthless or nearly so, are destined within the next ten years to become our most valuable and permanent grass lands ; while other thousands of acres now too wet for the plow will be so drained as to become among our best grain growing lands, suitable for annual rotations of the grasses and the cereals.

And yet, lamentable as it is in this enlightened age of agricultural improvement, there are some in almost every community, and altogether too many that "follow the beaten track of their fathers ;" they are wedded to old, and as they say, "to tried customs ;" they seek no change, desire none repudiate book farming, read no Agricultural paper, lest it detract from their stock of common sense. Even on this question of improvement by draining, I recently heard a farmer say, "it is hard enough to get a living from land as the Almighty made it without making it ourselves!" And so it ever will be hard enough for such a man to dig a living out of the earth any where, however fertile he may find it. J. W. COLBURNE.

Springfield, Vt., January 30, 1859.

General Farm Management.

MESSRS. EDITORS—In the Co. GENT., Dec. 16, you ask for one of your readers, of those having had some experience in dairying and stock keeping, how much stock can be kept on 100 acres. To answer that question satisfactorily, would unfold the whole secret of farming, and furnish ample means for columns in your paper, which I should like to see filled by those who have had more experience than myself.

My farm contains 93½ acres—deducting 10 acres for wood, 2½ for orchard, 2 for road, and one for garden, yards and lanes, it leaves me 78 acres, which we try to improve and cultivate. The usual number of cows I keep is twenty ; some seasons we have more and have kept at other times but seventeen. They will average twenty, or a little over. A part of the time we keep three horses, never less than two—and sell, in fat pork and live pigs, $100 worth annually. For the last two years have done something in the line of wintering sheep, and sold from 200 to 500 bushels of grain yearly, and am sorry to own some fodder. I never raise any calves, and to keep the number of cows good, always buy, usually in the month of Sept. or Oct. I have about 40 acres in pasturing, from 15 to 20 in meadow, and the same amount in plow-land, that is sown or planted to spring crops. I like to seed down the second year after greensward plowing, and put on one bushel Timothy seed and 15 lbs. red clover to three acres, and usually get the best hay the second year. My meadows hold good from three to five years. I like to sow the largest breadth of the plow-land to Barley. It is a good spring crop to stock down on, and we raise no better straw to feed in Jefferson County. Those dry seasons and short crops of hay and grain, we had a few years ago, learned me a lesson, not easily forgotten, in the line of wintering cows on straw. I had 10 acres winter Rye each year, the straw of which my cows eat after this manner : The straw was cut with a good straw cutter in a large quantity at a time, and thrashed with horses after it was cut, until it was soft and fine, and looked like the straw in a well worn out bed. I continue the same practice yet. It was then thrown upon one end of the floor into a large heap, ready for use as wanted, at which time we would haul down on the floor in front of the cows enough to last about three days, and wet it with at least fifteen pails of water, and dust over a small quantity of wheat shorts, and stir it all up well. About two weeks before the cows are to come in, we change to Rye meal instead of shorts, and continue this practice as long as the straw lasts. After the straw is gone, we are not particular to stop mealing the cows until about the 10th of May, preferring always to change from rye meal to corn, oat, or barley meal, immediately after they begin to milk.

The amount of stock kept depends as much on the manner in which they are cared for, as on the amount of hay and grain raised.

I never feed one fork full of anything out doors. My manger is tight and smooth, and every day swept clean. Not a handful of orts, chaff, dust, or dirt of any kind is suffered to remain. I should say, as I am speaking particularly of myself, that I arranged and moved my barns so as to work them all into one barn, 86 by 41 feet—the floor the entire 86 feet in front of the manger. I have ample room for twenty-two cows and four horses. When feeding straw we have orts enough to bed cows and horses all handy, and sometimes a surplus which is always saved until wanted, and when feeding cornstalks they are fed whole and the buts are taken to the straw cutter and cut, mixed with straw and thrashed and returned to the manger again. You will discover I care for but little litter in the yard, for my cows are not turned out until about 12 o'clock, and if stormy returned to the stanchions in less than one hour. In pleasant weather they sometimes remain out two hours. I prefer to have them in the stable, although I have a good shed the entire length of the yard where they run and get their drink. We keep a good sprinkling of slacked lime on the stable floor to prevent lice. This important item we learned from THE CULTIVATOR a good while ago. It has done us more good than the price of that sheet five years.

My cows are the common native, with now and then one imported from Canada, which are usually good milkers, and full aged ones in fair condition, will dress 600 lbs, and for the last few years we have made on the average, 185 lbs butter to sell per cow, counting farrow cows and all kept on the farm, and making no deduction for family use.

Your correspondent thinks his farm does not produce as well as heretofore, and what we are now doing is to give in our experience, and attempt to give a little advice, which we will do in the shortest possible way. First, by advising to put on the third horse on the plough, and turn up about four inches hardpan and undersoil that he has never seen, and sow that kind of grain best adapted to his soil with a generous amount of grass seed, and apply what manure he can get to his plowed land, and continue manuring the grass land on the surface, and we think he will soon see a favorable change, not neglecting to sow plaster on his grass lands and on the greensward crops of grain, which we have often found beneficial to ourselves. I have no particular cause of complaint, but the other part of our house hen-pecks us more because I often express a wish that I could buy and haul home dung, than for almost all other causes.

I never sold a bushel of ashes, but have bought many. They are always sown on grass lands, and mixed with lime and plaster for the potato crop. I have never summered over twenty loads manure in the barn-yard. It is all drawn out in the winter and early spring, and applied to plowed land or top dressing for meadows. I am always careful to make at least fifteen loads hog manure each year, which answers well for the garden, and sometimes a little to spare for the nursery and a carrot and turnip patch in the orchard. Perhaps your friend may think fifteen loads hog dung rather generous, but we add very materially to the amount of dung naturally made by the hogs, by throwing into the yard a few loads of leaves and muck from the woods, and occasionally throw in a little horse dung. And we have killed and boiled hundreds of sheep, and muttoned more beef cattle than farmers usually do. The bones from this source, and all the old dog fetches home, are carefully saved, and to dissolve them they are burnt a little and mixed with ashes, and sown with some profit.

.The farm which we now own, and have for the last seventeen years, is a small one, and is about one-third of a large farm that was taken up and cleared fifty-seven years ago. Being the fartherest part of the farm from the buildings, there was but little manure returned to that part of the farm that I now own, until I purchased it, and commenced the managing of it myself. Since that time we have tried to do the best our health and circumstances would admit, and one year ago last haying Gov. **MATTESON** of Illinois, visiting us after an absence of some twenty years, expressed his astonishment at the growth of our hay, and wanted to know where I procured dung to keep up the richness of our farm. He said I cut better hay than grew on the same farm twenty-five years ago. Not thinking I deserved the compliment from the Governor, I made him no answer, but will tell your friend I got the manure in my barn-yard. **DANIEL PARKER.**
Watertown, N. Y.

Corn Culture—Plowing and Manures.

MESSRS. EDITORS—As much is said about raising corn, the depth of plowing, manner of culture, application of manure, variety of corn, &c., I will simply state my mode, and the result. My soil is red slate, on a hillside facing east, and dry. I usually plow with a straight plow, and, as we term it, carry my furrows, returning in the same furrow, and plowing what we can, making in all a furrow six to eight inches deep. This is sod ground, as I plant no other. I plant as soon as possible after the 10th of May, rowing sideways of the hill, and three feet between rows, and two and one-half between hills, cultivating and hoeing twice—the first time as soon as I can conveniently follow the rows.

I am an advocate for plowing under manure, not so much for the benefit of the present crop, as for the second crop and the seeding to clover. The past season, I broke and planted eight and three-fourths acres, with a small eight-rowed variety of corn,(smaller than the King Philip,) called Tucket corn, with no other manure than ten barrels of plaster and ashes, applied immediately after coming up. The field being high land, never had a load of manure to my knowledge. I laid out twenty-seven days' work on the field, to plant, ash, cultivate and hoe *twice*, and I harvested one hundred and thirty-three bushels of ears to the acre—equal to sixty six and one-half bushels shelled corn to the acre. W. J. *Otego.*

Iowa Farmer's College, &c.

DESMOINES, IOWA, JAN. 15, 1859.

TO THE EDITORS OF THE COUNTRY GENTLEMAN—This has been quite an Agricultural week in this city, owing to the annual sessions of the Board of Trustees of the Iowa Farmer's College, and the Board of Directors of the Iowa State Agricultural Society, with delegates from all sections of the State from County Agricultural Societies. It was the first meeting of the first named, to take measures for the selection of a farm, and for the government of the College. There were nine Trustees present out of thirteen named in the act incorporating the institution. The deliberations of the body excited considerable interest, and were attended throughout by a large number of spectators. There were some seven propositions to donate lands, monies, &c., in value from $5000 to $30,000. A committee was appointed to examine the sites offered, and any others that may be offered previous to the first of May next, who are required to report upon them at the next meeting of the Trustees in June. From the desire which the citizens of many of the counties have exhibited to obtain the location of this Institution within their borders, it may fairly be presumed that lands sufficient to meet the requirements of the act (640 acres,) and money sufficient to improve them will be donated to the College, which, with the $10,000 appropriated by the State, and the proceeds of five sections of land in Jasper county, will be sufficient to meet all its wants for the first two or three years. By the terms of the act the location must be made by the first of July next.

A committee of three of the Trustees was appointed to correspond with gentlemen over the Union, with the view of obtaining a President and Professors for the College, for the action of the Board at its next session. Any one reading this, who knows of any person competent to fill any of these chairs, would confer a favor upon this new institution by sending their names and qualifications to the Secretary of the College at Desmoines, Iowa. I presume the salaries will not be very attractive at first, yet there may be many who would consent to take them who are every way competent.

WM. DUANE WILSON of Desmoines, the present Secretary of the College, was re-elected for the term of two years; and **RICHARD GAINES** of Fairfield, Jefferson Co., was elected Treasurer, to serve for one year.

The State Agricultural Society have located their fair again, for this year, at Oskaloosa, Mahaska county. Z. T. **FISHER**, Esq., of Mahaska Co., was elected President for the ensuing year; W. W. **HAMILTON** of Dubuque Co., Vice President; J. H. **WALLACE** of Muscatine Co., Secretary, and **ROBERT SEEVERS** of Mahaska Co., Treasurer. Interesting essays were read in the evenings, on several of the most important branches of Agriculture.

A District Agricultural Society was formed during the week, embracing some eight counties, of which this (Polk) county is the center.

Iowa is advancing rapidly in all that pertains to disseminating information in regard to practical agriculture. Out of about eighty organized counties, she has already sixty-two County Agricultural Societies, perhaps a dozen of which, however, have been so recently organized that they have had no opportunity of holding fairs. There is paid from our State Treasury annually, about $15,000 to the State and county societies. This is doing very well for a new State. * * *

Great Yield of Indian Corn.

According to a statement in *The South Countryman*—(a new monthly Agricultural journal commenced the present year at Marietta, Geo., and of which C. W. HOWARD, Esq., is editor)—Dr. J. W. PARKER of Columbia, S. C., grew the past season, *two hundred bushels and twelve quarts* of good sound corn on one acre of land. The certificate of the surveyor who measured the land—with the certificates of four gentlemen who certify that they "superintended the harvesting and measurement," and that "the manner and measurement of which we regard as accurate, and such as would be entirely satisfactory to us if we were buying," are given. Mr. HOWARD writes us that "all the parties whose names are connected with this statement, are of the highest respectability."

Dr. Parker gives the following account of the manner in which this extraordinary crop was grown:

The ground selected for my experiment, was sand hill branch land; after drying it by underground drains, it was broken up with a common tongue plow in November; about 25 two-horse loads of manure from my cow-house, were spread over each acre in December, and well plowed in with a two-horse iron plow (Glaze.) followed with the subsoil plow, drawn by two mules. About the first of March, another coat of good stable and cow manure was spread and plowed in as the first. Early in April, three cart loads of air-slacked lime, and two sacks of salt, were spread over it, and lightly plowed under. On the 14th of May, the ground was thoroughly plowed with Glaze's large iron plow, harrowed level and laid off thirty inches apart with a shovel plow. Guano and Plaster were sprinkled in the furrows, near 200 lbs. of the former, and 300 lbs. of the latter, to the acre,

The seed selected for planting, was from North Carolina, and designated "Bale Mountain Corn." After soaking it during the night in a strong solution of nitre, it was planted from 8 to 12 inches distance in the row, covered it with hoes, and rolled the ground, leaving it perfectly level. On the 14th, it was plowed with a long, very narrow plow, and dressed over with hoes. On the 5th and 17th of June, the same work was repeated, each time leaving the ground level. About the first of July, it was necessary to draw a ridge about the roots of the corn to prevent its falling. During a protracted drought, it was twice irrigated.

The preparatory plowing, sub-soiling, planting and culture per acre, sums up	$16.50
Salt and lime,	5.50
Guano,	8.00
To which add domestic manure worth	25.00
Total,	$55.00

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Bucks Co. Ag. Society and Mechanics' Institute.

The Annual Meeting of the Society was held at the Newtown Hall, on the 20th January—the President in the chair. The record of proceedings of last meeting was read and approved. After the transaction of the usual business of the Society, and nominating officers for the ensuing year, the Society adjourned for one hour.

On re-assembling, John Bamsley, E. G. Harrison, and Edward H. Worstall, were appointed tellers, and the meeting proceeded to an election by ballot. After receiving and counting the votes, the tellers reported the following persons as duly elected:

President—WILLIAM STAVELY of Solebury.
Vice-President—Robt. Longshore of Lower Makefield.
Rec. Secretary—John S. Brown of Doylestown.
Cor. Secretary—Edmund G. Harrison of Middletown.
Treasurer—Jacob Eastburn of Solebury.
Managers—Gen. W. T. Rogers, Jas. C. Cornell, Adrian Cornell, J. Watson Case, John Blackgan Jonathan Knight, J. Paul Knight, James W. Newbold, John Kelsey, Samuel Buckman, Capt. Joseph Eyre, Lewis Buckman, Silas Carey, Hector C. Jones, John Robbins.

The President, on resuming the chair, in a brief speech, thanked the Society for the renewed expression of their confidence, and pledged his devotion to the interests of the Society, and his efforts for a faithful and impartial discharge of his duty.

The Society was numerously attended: everything passed off with entire harmony, and after some further proceedings, and the passage of a resolution to hold the next exhibition for two days, the Society adjourned.

Farming in Connecticut.

Products of a Fifty-Six Acre Farm—Onions and Carrots grown together, &c.

MESSRS. EDITORS—Although I have had only five years experience in carrying on a farm, as the committee of the New-London County Ag. Society have seen fit to award me the first premium for the best cultivated farm in the county, I will presume to let you know what I have been doing this year. My farm consists of 56 acres, four of which is woods, about sixteen of pasture, and three of orchard. I took the first premium for the best quarter acre of onions. It yielded 188 bushels of onions, and 112 bushels of carrots, making 300 bushels on one-quarter of an acre. Not a bad crop for land that my neighbors said would not raise onions, when I first took the farm five years ago.

Now for what I have raised the past season:

1000 bushels of potatoes, at 62½ cts.,	$625.00
2500 lbs. of pork, at 8 cts. per lb.,	200.00
260 bush. ears of corn,	150.00
300 do. onions, sold for	153.62
600 lbs. of butter, sold for	137 00
180 bush. of oats,	90.00
160 do. carrots, sold for	50.00
100 do. apples, sold for	62.50
746 lbs. of veal, sold for	38 39
112 dozen of eggs, sold for	18.00
200 lbs. poultry,	25.00
10 bush. of beets,	6.00
8 do. buckwheat,	6.00
8 do. quinces, sold for	8.00
2 do. beans,	4.00
	$1,573 51

I have sold 800 bushels of potatoes at an average of 64 cts. per bushel, and I have between 200 and 300 more to sell, so I have called them 1,000 bushels at 62½ cts. Pork probably will be more than eight cts., and my hogs may weigh more. My corn I think will shell more than 150 bushels. Oats sell for 50 cts. in the crib, they being clear of foul seed.

I have raised two of my calves, which are now worth $25, and have kept one yoke of oxen, two horses, seven cows, one two-year old heifer, and two yearlings. I make about 250 loads of manure a year—use a ton of guano, and two tons of plaster. Shall use the coming year in the neighborhood of 1,000 bushels of ashes. S. N. *New-London Co., Ct.*

We wish our correspondent had added to the above, the expenses for carrying on his farm for the year—also its increased value, caused by its improved condition, over what it was, when he purchased it five years ago. Over $30 per acre, where about one-third of the land is is pasture, is a pretty good income certainly. How many farms come up to this mark?

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Feeding Cornstalks for a Change of Food.

MESSRS. TUCKER & SON—Allow me to say that your correspondent "J." of Niagara Co., "writes right well, and like a country gentleman," on the subject of feeding cornstalks, equally as to time and manner. On this topic, what he has done and said, is well done and well said. But a few more hints might be added, which I will attempt to do.

A change of food through the astringent weather of the winter months, is admitted on all hands to be not only useful, but positively necessary, and, though others prefer watery roots in the winter, as they have probably sufficient reason, and certainly a good right to do, I prefer dry food for winter, which seems to me more seasonable than snow in harvest, or roots in frosty weather. Fully conceding the economy of a frequent change of food, I also endeavor to practice it.

Accordingly, although I put up 90 tons of hay, and have more than enough, it was obvious that hay—hay all the time, would cloy the appetite of the most healthy animal. We therefore cut up the corn, and have been feeding out the stalks *twice* a week, since the ground was frozen hard enough to bear the ox team and sled. So far this change of food works well; the cows and colts appearing to relish a change of rations most decidedly; and, judging from appearances, we see no reason to doubt the economy of so feeding cornstalks through the winter, to keep stock in good health. We move to continue, and hope there will be no opposition to the practice. J. W. C. *Wisconsin.*

Culture of the Watermelon.

Eds. Co. Gent.—There are few people that do not like watermelons; yet we find few of our farmers who grow them with any degree of success in their gardens. It is partly to name two very good varieties I have grown, and to give some hints upon their management, that I write. The varieties are the Pomarian and Bradford—the latter is the best, and superior to any watermelon I ever grew. The seeds of both you sent me last April. I started my seeds in a hot-bed; set them out in a hill dug deep and large, made rich and mellow with sand. From my four seeds of the Bradford, my product was twelve fine-sized, well-ripened melons, beautiful both to the eye and taste.

There are three things to be observed, and requisite to success, in growing watermelons. First, early planting—the hot-bed will help us when the season is late. Second, a deep, rich, well-prepared soil. Third, it must be sandy, naturally or artificially. Observe these three requisites, and with proper care, success is always sure. To illustrate the necessity for a deep, melllow, well-prepared soil, I will mention that I measured roots from a hill of watermelons last autumn, which were over nine feet in length.

The Bradford watermelon is large size, very sweet, juicy, and tender; flesh fine red to the center; rind thin, about half an inch thick; seeds yellowish white, with a pink eye.

The Pomarian is a very fine melon, but not quite as good as Bradford, not bearing so profusely. Jas. H. Hopkins. *Clark's Mills, Oneida Co., N. Y.*

Currant and Tomato Vinegar.

Messrs. Editors—I wish to tell you how and of what I make vinegar. Last year, for trial, I took 14 lbs. of currants, mashed them as for wine, put them into a tub, and put two or three pails of water to them. Then let them stand several days, stirring it two or three times a day. After standing so several days, I strained or pressed it, and with molasses enough to make it as sweet as new cider, I had 10 gallons. I put it into a keg, and did not open it till Dec., when I found it to be as good vinegar as was ever made.

I use the pomace of the currant and grape for vinegar. After getting out the juice for wine, put the pomace back into the tub, and put water to it; stir it up and jam it up; let it stand, if it sours in the tub as well as if after pressing out the juice. Then I sweeten it till it tastes about like good apple juice just from the press.

Last summer I saw a recipe for making tomato wine. The writer remarked what a blessing it would be to the west if vinegar could be made from them. I knew that any fruit or berry that would make wine would make vinegar. I tried a little for wine and vinegar. I made but a few gallons for vinegar, and have let it stand in an open cask, and it is now good vinegar. Do not forget the sweetening. After this had stood a few weeks, I thought it was not sweet enough, so I sweetened it more. I also use the lees of my wine for vinegar; put water to it, stir it and break it up well; judge by the taste when you get water enough in. I do not leave but a little of the wine taste; sometimes I sweeten it more. Put the muddy looking stuff into a barrel; it will settle clear, and make as good a vinegar as cider.

The 10 gallons of vinegar that I made from 14 lbs. currants, ought to have been increased to 12—it was too strong. The vinegar I make from the pomace and lees more than pays the manufacture of the wine. D. B. Richards. *Brewster's Station.*

Burying Money.

A Saratoga Co. Farmer, who put $100 under ground in the shape of drain tile, expense of laying, &c., gives the "facts and figures" in a communication to the *Rural New-Yorker*. He had a field of five acres never plowed, being very swampy or springy, except one and a-half acres; the whole overrun with weeds, and about worthless even for pasture. This he drained at a cost of $100, as above. The first crop (potatoes and buckwheat,) on four acres, returned the amount expended—the second, (potatoes and oats,) on the whole lot, gave $127; and the third (mostly corn,) was worth $226. Another advantage is that the drains give a permanent supply of water to four fields—the discharge never failing in the dryest weather.

"Dropsical Land"—Mr. Johnston's Remedy.

We seldom see a more forcible statement of the characteristics of a soil which draining will very decidedly benefit, than the following, from a communication to the *Boston Cultivator* by our old friend, Mr. John Johnston. He says:

"The advocates of drainage expect farmers to be possessed of common sense enough to discriminate between land that will pay for draining and that which will not. If there are those that cannot so discriminate, the draining of a few acres will show plainly whether it will or not, so that even if one has very little judgment in the case he need not essentially err. Every man may have observed that one part of a field will in general produce fine bright straw (it may be wheat or other grain) with plump heavy ears, giving a satisfactory return for seed and labor expended, while immediately adjoining such part of the field another portion produces dark colored straw (even if not rusted,) and, lean ears, with light unremunerating grain. Now did it never occur to the farmer to ask himself the reason why one part of the field brought good grain and the other bad? for surely he must see there was a local cause. I will tell how it is: the part giving good grain is sound, healthy land; the part giving bad grain is *dropsical* and diseased. Whatever manure may have been applied to it, did little or no good, and whatever vegetation it produced was unhealthy like itself. To prove what I say, let a ditch be dug in the sound land, and there will be no run of water, even in a wet time unless there is a snow-bank melting near by, which runs into the ditch from the surface. Then let another ditch be dug through the *diseased* land, two and a half feet deep, and in ninety-nine cases out of a hundred there will be a free run of water, and that coming at or near the bottom of the ditch. And if the *dropsical* portion is thoroughly tapped, it will bring for a number of years much better crops than the land that was healthy from the beginning. In many cases such land will pay the cost of draining by the excess of the first crop, where it can be drained for $15 to $22 per acre."

Remedy for Leaky Teats.

Messrs. Editors—In answer to the inquiry of R. W., as to the remedy for cow's leaking their milk, I would say that I had a heifer that had a hole in the side of her teat, which gave as large a stream of milk as the hole in the end. And now for the remedy. As soon as she became dry, I took the twirl between my thumb and fore-finger, and pulling slightly, I cut it entirely out with a pair of sheep shears; before the cow calved again, the wound became healed, and with it the cow's teat was rendered as sound as the others, and it has remained so ever since I performed the operation, which was a number of years ago. I was careful to cut deep enough to get out all of the hard substance at the point indicated. J. H. C. *So. Amenia, N. Y.*

To remedy the leakage of milk, I should make a fresh wound up the passage when the cow is dry, and take a stitch in it to close it up. J. B.

After the cow is dried for the season, cut away the skin covering the orifice, and as far into the pipe as possible. If the hole is quite small, a hot wire may be introduced to remove the skin. Then sew up carefully, and dame Nature will finish the work. S. J. S.

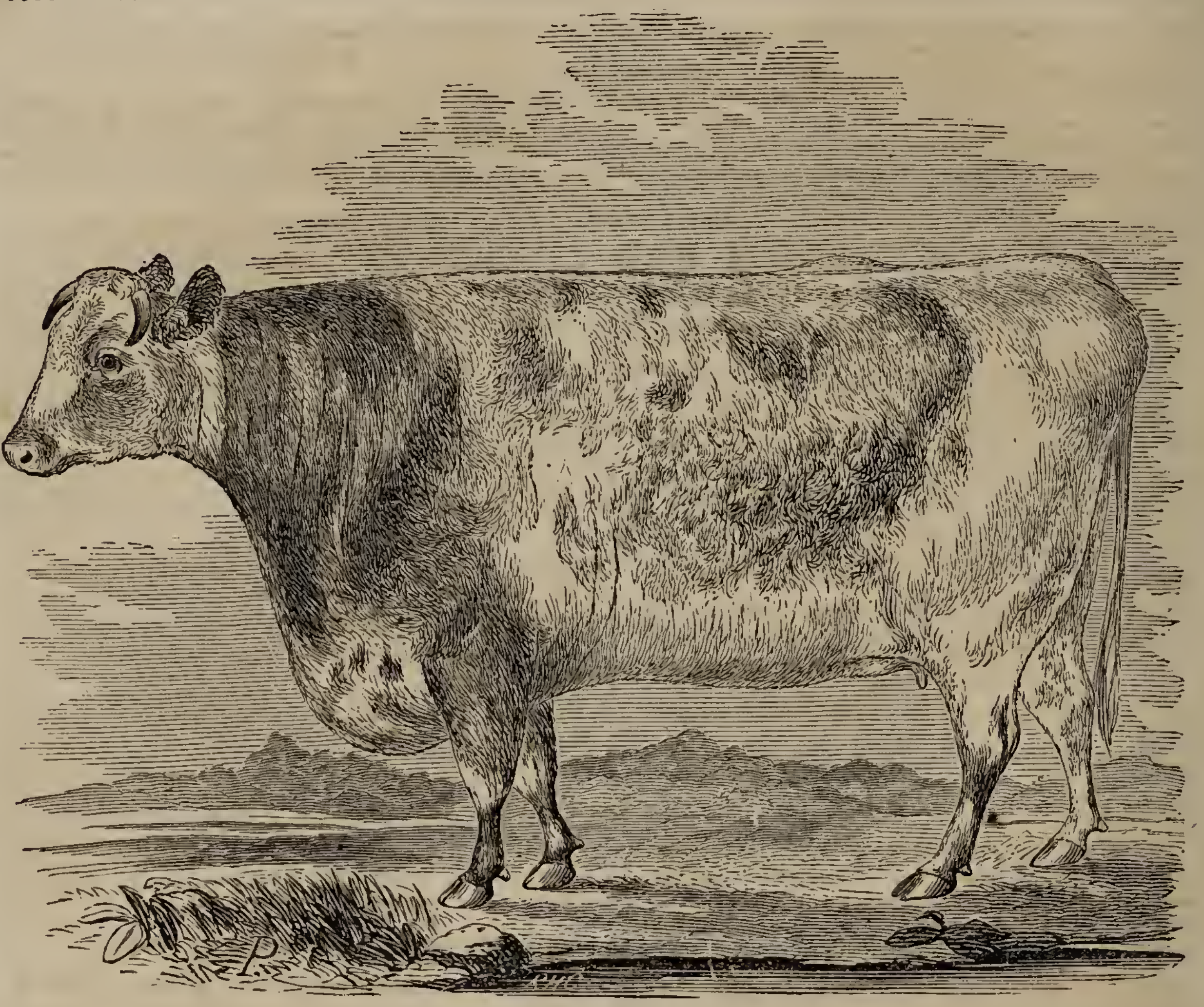
Cows Holding up their Milk.

To prevent cows holding up their milk, drive them with the head up hill or head down hill, or in a position in the stall so that the fore feet are raised considerable higher than the hind ones.

I do not say this is a remedy in all cases, but it has proved a good one with me. J. J. R.

Best Soil for Sorghum.

The Sorghum plant at the West differs much in quality, according to the soil on which it is grown. The *Prairie Farmer* gives the preference "to a compact marly soil. Even a stiff clay is better than the black loam of our prairies." The "barrens" (so called,) are still better—the juice is limpid and purer. High dry soil, on bluffs or side-hill exposures, is the kind.



Short-Horn Cow "Lady Booth."

The property of EZRA CORNELL, Ithaca, N. Y. Roan, calved December, 1850; bred by J. Emerson, Eryholme, England—got by Chilton (10,054) out of Rosabella by Buckingham (3239)—Rosalba by Highflyer (2122)—Rachel by Frederick (1060)— ——— by Planet (502.) Lady Booth won the first prize at the New-York State Fair at Saratoga, in 1853, as the best two-year-old heifer. She was also one of the cows that competed successfully for the herd premium at the United States Fair at Boston, in 1855.

New-York State Ag. Society—Annual Meeting.

The Society met according to notice in the Assembly Chamber, Feb. 9, the President Hon. W. T. McCOUN in the chair. The attendance, although not as large in numbers as it has sometimes been, included many of the oldest and best friends of this institution from different parts of the state. The reading of the Treasurer's report, which was first in order, showed a balance of cash on hand of $2,650.93—the total receipts of the year from all sources having been $18,356.27, and the total expenditures $15,705.34. The Report of the Executive Committee was then read by the Secretary, Col. JOHNSON, comprising the usual review of the past year in the Society's history, as well as in the annals of agriculture in other states—tracing the steps of progress, while pointing also to means of further improvement, and referring particularly to several subjects now of especial interest—among them the gratifying increase that has been going on in the Society's Library, and the reasons—recently called in question—on which the Executive Committee based the establishment of the Society's Journal. A motion of acceptance and adoption having been proposed and carried,

On motion of Hon. A. B. CONGER, the customary committee of three from each judicial district was appointed to nominate officers for the ensuing year, and to recommend the place for holding the next Annual Fair. Hon. T. C. PETERS submitted several propositions for discussion after the recess.

On re-assembling in the afternoon, the Society accepted the report of the Nominating Committee, and voted to recommend to the Executive Committee that ALBANY should be the place of the next Fair, while the following officers were balloted for and unanimously chosen:

President—A. B. CONGER of Rockland.

Vice-Presidents—E. G. Faile of New-York; C. S. Wainwright of Dutchess; Herman Wendell of Albany; H. W. Beckwith of Washington; B. N. Huntington of Oneida; S. A. Law of Delaware; James O. Sheldon of Ontario; T. C. Peters of Genesee.

Corresponding Secretary—B. P. Johnson.

Recording Secretary—Erastus Corning, Jr.

Treasurer—Luther H. Tucker.

Executive Committee—Thomas B. Carroll, H. W. Dwight, E A. Lawrence, C. Boughton, Alrick Hubbell

The resolutions laid on the table by Mr. PETERS were then brought up for discussion—one recommending to the consideration of the Legislature a law requiring assessors to collect Agricultural Statistics—and another, recommending that the Executive Committee glean from the State collection of botanical works, the materials necessary for an illustrated book upon the Grasses of the State. In the debate that followed, Messrs.

Peters, Geddes, Osborn, Cornell, Faile, Newcomb, Gould, Conger, Johnson, Turrill, and several others took part, and after some modifications the resolutions were referred to the Executive Committee, as was also a resolution by Mr. Emery, in favor of a modification and equalization of the tolls on Agricultural Implements, recommending that a uniform toll of not more than two mills be fixed by the Canal Board.

Other resolutions were voted, having reference to a more strict construction by judges of cattle at the Society's Fairs, of its standards of merit for the different breeds (submitted by Mr. Cornell of Ithaca;) and approving of the objects and establishment of the Society's Journal (submitted by Mr. Peters of Genesee.) Resolutions involving the subject of tolls upon railroads were laid upon the table after an animated discussion

In the evening Prof. North of Hamilton College, read an address upon Trees and Tree-lovers, embodying in it an extended eulogy and sketch of the late A. J. Downing; after which Dr. Fitch gave a brief description of several varieties of insects into whose habits and ravages he has been carrying his investigations, pointing and illustrating his remarks by an interesting exhibition of specimens. After the completion of this address, although the hour was late, a debate took place, beginning upon some entomological points and closing by one of Mr. Dickinson's discursive and spirited speeches. The next day was devoted by the committees and spectators to an examination of the articles on exhibition in the rooms of the Society. The show consisted of butter, cheese, samples of grain and seeds, potatoes, fruit, sugar, dressed poultry, &c.; also quite a little display of Agricultural implements and machinery. The show of fruits, in consequence of the general failure of that crop the past season, was limited, but there was an unusually good exhibition of samples of grain and seeds, while that of butter and cheese we think equal, if not better, than has generally been contributed on similar occasions. Mr. Goodrich of Utica, presented 105 varieties, all originated by him, of seedling potatoes, and other exhibitors also brought samples of considerable excellence. Mr. Goodrich, as our readers are aware, has made this subject a specialty for many years, and has contributed largely to the improvement of the Potato, at a period when the tendency towards deterioration has been marked and general. A special committee was appointed to examine and report hereafter upon his exhibition.

The premiums awarded we give below:

FARMS.

L. D. Clift, Carmel, Put. Co., grazing farm, 1st pr.,	$50
Grain farms, under 50 acres, S. Walrath, St. Lawrence Co., 1st pr.,	50
Grain farms, over 50 acres, L. Sherrill, Greene Co., 2d pr.,	30

CHEESE DAIRIES.

1. James S. Jackson, Leyden,	$50
2. Norman Gowdy, Lowville,	30
L. S. Standring, Denmark, special pr.,	Silver Medal.
Clemence Whitaker, Martinsburg, specially commended.	

BUTTER DAIRIES.

1. J. C. Collins, Lewis Co.,	$50

BUTTER.

Best 3 firkins, Wm. H. Pew, Lewis Co.,	$15
2d do., Hiram Mills, Lowville, do	10
3d do., L. L. French, Richfield Springs, Otsego Co.,	5

Butter made June, August and November.

Best 3 firkins, B. S. Carpenter, Elmira, Chemung Co.	$15
One tub, Miss Jane E. Mills, Lowville, 14 years old, very superior	Special prem.

Winter made Butter.

Best, Ela Merriam, Leyden, Lewis Co.	$5
2d do., Norman Gowdy, Lowville	3
3d do., Miss Walrath, Canton, St. Law. Co.,	Trans.
4th do., Miss Van Auken, Phelps, Ontario Co.,	Trans.

CHEESE.

Best, Norman Gowdy, Lewis Co.,	$15
2d do., Theron Van Auken, Phelps, Ontario Co.,	10

ESSAY.

Robert L. Pell, New-York, on the edible fishes of New-York, plate,	$100

DRAINING.

1. William Johnson, Geneva,	$20
2. Jonathan Talcott, Rome,	10
S. Walrath, Canton, special premium,	Silver Medal.

PREPARED GRASSES.

1. Mrs. J. T. Van Namee, Pittstown,	$15

COLLECTION OF GRAINS IN STRAW.

1. Mrs. J. T. Van Namee, Pittstown,	$10

WINTER FRUIT.

Apples—Best 20 varieties, J. W. Bailey, Plattsburgh,	Diploma and $4
Best 10 do. W. P. Ottley, Phelps, Ontario co.,	Dip and $3
Second best do., W. Ives, Watertown,	Barry and $1
Third do., J. M. Mattison, Tompkins co.,	Trans.
Best plate (Baldwin) W. P. Ottley, Phelps,	Silver Medal
Second do., J. M. Mattison, (King)	Thomas
Grapes—Best sample (Isabella) R. P. Wiles, Albany,	Silver Medal.

FIELD CROPS.

Spring Wheat—Solomon Walrath, Canton, St. Lawrence Co., the quantity land not sufficient—crop at rate of 40 bu. per acre.	
1. Barley—Norman Gowdy, Lowville, 50 bushels,	$15
1. Rye—C. L. Kiersted, Kingston, 44 bushels,	15
1. Oats do. do. 115 bushels,	15
1. Corn do. do. 99½ bushels,	15
2. B S. Carpenter, Baldwin, 80 bushels,	10
Peas—Ira R. Peck, East Bloomfield, 1st do.	8
Beans—S. Walrath, Canton, St. Lawrence Co.,	Medal.
1. Potatoes—Levi Hanford & Hiram Olmstead, Walton, Delaware Co., 1 6-160 acre, 233 bu.,	$8
1. Ruta Bagas—Levi Hanford & Hiram Olmstead,	Vol. Trans.
1. Mangold Wurzel—Thos Messenger, East Neck,	$8

Hon. A. B. Dickinson, Hornby, exhibited a new Draining Plow which attracted much attention, and was fully explained as to its operation by Mr. Dickinson. It promises in stiff clay soil, to reduce very materially the cost of drainage, and is within the means of every farmer.

Thursday evening the Society listened to a valuable and instructive address from Chancellor McCoun, the retiring President, who then introduced Hon. A. B. Conger, the incumbent for the coming year. Mr. C. made a few pertinent remarks, after which, the thanks of the meeting having been voted to both gentlemen for their addresses, and to the former for his services during the year that thus came to its conclusion, a similar resolution was passed expressive of the general appreciation of Col. Johnson's performance of the duties of his office, and an adjournment without day was had—bringing to its close one of the most harmonious and pleasant reunions of the kind, at which we have ever been present, and a fuller report of the proceedings at which, we much regret that our space at present will not permit us to give.

Sugar and Molasses from the Sorgho.

I this year planted thirty-eight rods of ground to Chinese Sugar Cane, and from that I made thirty-eight and a half gallons of molasses. There is sugar on the bottom of the cans; and from about five quarts of molasses that had stood in a pail for some time, I got seven pounds twelve ounces sugar after draining off the molasses. The molasses weighs eleven pounds nine ounces to the gallon, and the flavor is equal to the best sugar house syrup. Do you know of any of the African Imphee being raised? If so, with what success, and where can the genuine seed be obtained, and at what price. I find, in working up the sugar cane, there is a vast difference in the stalk and also in the quality of the molasses. I have a mill made after the pattern of R. Peters, of Georgia, that cost $50, that works admirably. S. H. Cowles. *Norfolk, Ct.*

Preparation of Food for Plants.

I am rejoiced to see the attention of the farming community frequently called of late to the application of manure. That the land requires feeding as much as the body, has become a settled principle with thinking and observing men. How the food of the soil shall be cooked and fed out, is not so well settled. We all know that some housewives will make a barrel of flour, and a quarter of beef, go much farther to the nutriment of the family, than others less skilled. My mother (there is no cook like a mother,) selected with her own eye, a nice sirloin piece of beef, which was served up the first day as roast; the next day a few smooth cuts were put on the gridiron, and made a dinner fit for the king; the third day the smaller pieces were made into a *chicken* pie, and the fourth day the bones furnished a delicious and nutritious soup. Now-a-days, with Biddy for kitchen manager, a similar piece of beef makes one dinner for the family, and the balance goes to the dogs or hogs. Now does not the analogy hold good between food for the body and food for the soil? Is there not a vast amount of the latter wasted for want of proper preparation and application?

All stomachs do not require the same kind nor the same amount of food A wood-chopper, breathing rapidly in the open cold air of the forest, can eat pork, and it will do him good, while the sedentary student should avoid pork with the abhorrence of a Jew. With like discrimination should manure be applied to the land. The cold clay soil, will luxuriate with the warm horse manure, while a dry sandy soil with the same application, would be rendered parched and feverish, and half the virtue of the manure would vanish into thin air.

One word as to the preparation of manure. A little leaven put into the dough, converts the starch into sugar, and sweetens and renders palatable the whole mass. The leaven is a plant which, in its proper soil of dough, multiplies itself rapidly and indefinitely. Thus with manure; put it into a pile of muck or other vegetable matter, and the whole mass undergoes a fermentation, fitting it for the food of plants. I speak of that I know, and testify of that I have seen. I have seen one load of manure convert two loads of muck into as good pabulum for plants, as the most dainty subjects of the vegetable kingdom can demand. To be sure, the compost heap requires some skill and labor. So does the preparation of bread. The flour, milk, and yeast, require composting and kneading in right proportions, and with the requisite amount of heat. Very analagous in its preparation, is the compost heap. Would that our farmers would give the subject the attention it demands, and it requires no prophet's eye to see two blades of grass growing where one grew before. BERKSHIRE.

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Origin of the Cast-Iron Plow.

EDITORS OF "THE COUNTRY GENTLEMAN"—If your correspondent "G. L. of Stockport," will refer to the "Transactions of the Society instituted in the State of New-York, for the promotion of Agriculture, Arts, and Manufactures," published by joint resolution of the Senate and Assembly in 1794, he will find at page 6, part 2, the following entry, which may throw some light on the origin of cast iron plows:

> "Col. John Smith produced the model of a plow-share, according to which it was proposed to have that utensil made of *cast iron*, in order to save expense in husbandry, and come cheaper to farmers than those in common use, forged from *wrought iron*; and Mr. Smith and Judge Hobart were appointed to get several cast for trial."

At a subsequent page, 168, of the same volume, will be found Mr. Smith's report on the use of the newly projected share, in which he states that he "found it to exceed his most sanguine expectations," and informs the Society that they may be procured from Mr. Peter Curtenius in New-York.

This was undoubtedly the origin of the cast-iron plow. The transition from the cast share to the cast mould-board and other parts of the plow, was a natural and easy one. Subsequent inventors readily adopted the idea, and improved upon it, till at last have been produced the beautiful and perfect implements now universally used.

Col JOHN SMITH, named in the above extract, was the late Gen. Smith of St. George's Manor, in the county of Suffolk, himself an eminent and extensive agriculturist, and one of the original corporators of the old Agricultural Society of New-York. He for many years represented this State in the Senate of the United States at Washington, and died at his residence on Long Island in June, 1816. A SUBSCRIBER. *South Haven, N Y.*

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Western Apples—Budding.

MESSRS EDS —What fall apples would you recommend for cultivation in South Illinois, for *drying*, taking into consideration the *size* and *shape* of the fruit for peeling as well as other good qualities?(1.)

Can the operation of budding the pear on quince, be performed as easily by the amateur, as peach budding, or does it require more skill?(2.)

When should the buds be saved, and *how*, for budding the peach early in the season?(3.)

What kind of stocks are used in propagating the Orange quince by grafting?(4) A BABCOCK. *Union Co., Ill.*

(1) Keswick, Codlin, Duchess of Oldenburgh, Maideus' Blush, Sops of Wine, Fall Wine, Fall Orange, Fallawater.

(2) Budding the pear on quince requires but little more care and no more skill than to bud the peach. The pear bud must be inserted as late as practicable, so that it may not start the same summer; but if deferred a little too long the bark will not separate freely from the stock, and the operation prove a failure. To make good trees, the quince stocks should be budded nearly even with the surface of the ground.

(3) If our correspondent refers to spring budding, the shoots should be cut as grafts usually are, and kept dormant in an ice-house till the peach stocks are in leaf.

(4) One of the best modes of propagating the Orange quince is by layers or stools—cuttings often succeed—they do well on the Angers or upright quince—and sometimes on the apple root as root grafts, but the latter is uncertain.

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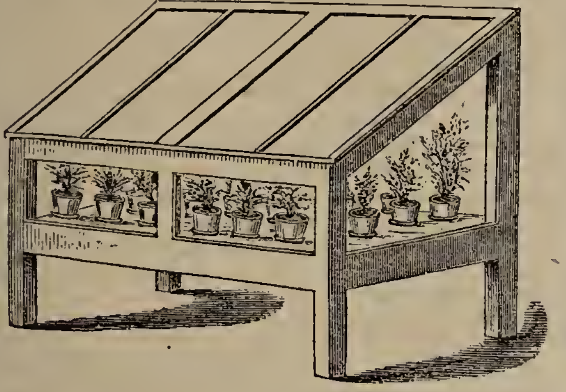
Remedy for a Breach or Burst.

I notice on page 33, vol. 13, that R. N. of Randolph, Vt., inquires how to cure a *breach* or *burst* in a yearling colt. This will probably reach him too late to be of any service, yet it may be of service to some one. I will give you the experience of a friend, who had a colt in the same situation. He began by dieting the animal, and feeding concentrated food; then putting a surcingle around the horse, so that it would cover the breach, and placing under the surcingle and over the breach, a bunch of cloth, he drew it as tight as he could, and kept drawing it tighter every day. It soon returned to its place, and the breach healed up with no damage to the animal. This ought to be done when the breach is fresh. The animal ought to be kept gaunted for some time. W. *of Alleghany Co., N. Y.*

The Parlor Plant-Case.

Under the title of Waltonian Case, we have introduced from England a very neat arrangement for the propagation and growth of plants in the parlor, by a lady amateur. An improvement, it appears, has been made on the original invention, by Mr. **Daniels** of Philadelphia, who advertises the case for sale. It is our object now, merely to call attention to this method, and to give our opinion in favor of it, as a very neat and portable parlor propagating pit or bed, as well as a pretty plant-case. It is heated by a lamp of burning oil or fluid, which heats a pan or boiler of water secreted under the movable bottom of the case. As we are limited to space, we shall leave it to the manufacturer to detail the method of its construction, as well as the cost and other particulars. A representation of the case as it stands, is annexed. It was invented by a Mr. Walton, as its name implies, and will prove a great desideratum to many. Should any farther information be desired, we shall be pleased to furnish it. The case may be constructed of any size from two feet wide in front, to three or six. A two-feet front case, should be about one foot from back to front, and about two feet in height to the bottom of the case, with an angle of 45° for the sash. The squares of glass are not secured, but fitted so as to slide, in order to admit air. The heating apparatus is very neat and clean in its operation.



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The Apple-Pie Water Melon.

Messrs. Editors—As Japan is at present attracting great attention from the people of this country, and we are, no doubt, to acquire from her many new and valuable trees, plants, fruits, and seeds, it may be of some interest to the readers of the Co. Gent., to see an account of one of her fruits already introduced to this country, by Commodore Perry in his expedition to her shores. I refer to the Japan Apple-Pie melon, which has already become somewhat famous, and bids fair to become very popular. As its name indicates, it is a melon whose chief value consists in its excellence for pies; and I would say, speaking from experience, that it makes very good pies, and is a very good substitute for apples for that purpose. In color, this melon is light green, oblong, and resembles the Orange Watermelon very much. The flesh is perfectly white, and very solid throughout, but cooks very easily, and when cooked, cannot be distinguished by its looks from green apples. It makes as good a preserve as a citron—some say better—and most excellent pickles, prepared with spices, &c., as "sweet pickles" usually are. Its chief excellence, however, lies in its adaptability for making pies; and all those that have had an opportunity to judge, as far as I know, pronounce it worthy of much praise for that purpose. Its keeping qualities are good, melons having been kept as late as March. I kept two in my cellar with no trouble, until Jan. 15th, at which time we wished to use them. The same culture that will cause watermelons to thrive, will cause this to do likewise. The sizes they grow to are from 25 to 50 lbs. The seeds are a greenish drab, size of watermelon seeds. The vines look somewhat like the latter, but are covered with short white fuz-like hairs, and when handled, emit a disagreeable odor. The melons that I grew this year, were awarded by the Oneida Co. Ag. Society, their first premium, in competition with citrons. J. H. **Hopkins.**

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Plain Cake.

Break two eggs into a cup; fill it up with cream; one cup of sugar, two of flour, a heaping teaspoon of cream of tartar, an even one of saleratus. **Mellie.**

Contributions to Bee Culture.

Raising of Queen Bees.—To breed "in and in" always leads to injurious consequences, in bees as well as in animals. It is well known that with bees, the young queen, who is to become the mother of a numerous progeny, leaves the hive five or six days after swarming, to pair with a drone. It is generally believed that this pairing takes place in the air; however, it has never yet been ascertained, whether the queen pairs with a drone out of her own hive, or with one out of a strange hive. Most of the apiarians, who have directed their attention to the subject, have come to the conclusion, that the queen only pairs with a drone out of her own hive when she cannot possibly meet with a strange one—the near relationship is repulsive to her. Has the queen been impregnated by a drone out of her own hive, (namely, her brother,) then the female of such a mother is less fruitful than if she had paired with a drone not so closely related; for only seldom will a swarm be thrown out of such a hive. Moreover, the workers are generally lazy, unconcerned about the prosperity of the hive, commence their work late in the morning, and are inclined to rob and carry in but little honey. If the season is unfavorable they suffer, and often starve. Now this is the reason why so many apiarians lose all their swarms—the relationship is too near! Such a loss will, however, not take place, provided there is an apiary not far off, to enable the queen to cohabit with a strange drone. If this will be the case, then the subsequent queen will be strong and healthy, and communicate to her numerous progeny the same quality. We are well aware that whenever a new species of bees are brought into a neighborhood, they will invariably mix with others, and that they cannot be kept pure, unless all hives are removed to a distance of from six to nine miles. These facts are important, connected with science, but have a much more important bearing in connection with practical bee culture. They teach the bee-keeper the necessity to obtain from time to time swarms of bees from a distance, to prevent "in and in" breeding, and in case he wishes to introduce a foreign species or race, to remove his domestic bees to a certain distance, in order to preserve their purity.

The above statements remind me of a subject which has occupied my thoughts for some time—namely, *the improvement of the race*—a subject which I consider important and *feasible.* Of course this improvement would depend upon the selection of the individual through whom you wish to propagate. It is true, the selection of a male in this case, would be difficult, if not impossible; but the selection of a female would be very easy. Old mothers should be avoided, and strong, healthy and young queens selected. In this way, I think, the race of bees could be improved. W. J. E.

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Failure of Western Fruit Trees.

Lewis Ellsworth, one of the most successful and intelligent fruit growers in Illinois, says in a communication to the Prairie Farmer, that the loss in fruit trees in that state within the last three years, is *millions of dollars*—that it is attributed to the cold winters and dry summers. But he asserts that to a great extent this result has arisen from their standing *unprotected* in a soil underlaid with a retentive clayey-loam subsoil, which characterizes most of the prairie lands. He has adopted the practice of ridging his land, by repeated plowings, commencing at the same ridges and ending at the same dead furrows, and where nursery trees were formerly thrown out by freezing, since ridging they stand throughout the winter without injury, and make a better growth in summer. He recommends the ridging system for all orchards, each row of trees being placed on the center of the ridge.

We have no doubt that draining would lessen the effects of severe winters on fruit trees in other regions than the west.

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How to Stop Bleeding.

A correspondent of the *Ohio Farmer* says—"I have noticed various ways for stopping blood. The article you will find enclosed is as easy and *sure a remedy* as I ever saw tried. It is called punk, and is found in old trees. It can be obtained by splitting the wood that has it in, and peal it off with with the fingers. It has to be rubbed up with the hand, and applied to the wound without any other preparation. It will stick itself to the wound, and stop the blood immediately, and without pain or irritation."

Culture of the Chinese Sugar Cane.

Editors Country Gentleman—The great value of the Chinese Sugar Cane is now almost universally acknowledged, especially is this so in the west. That which is really good will prove itself to be so; if it were not so, this invaluable plant would have stood a poor chance in the face of so much ridicule as has been heaped upon it. Even wise editors, catching the popular cry, had to warn the people against "another probable humbug." By the way, our farmers need less to be guarded against unwise experiments than to be urged to the trial of new ones. They are too *much* afraid of "humbugs," including in that term agricultural papers, and lose ten times as much as they could in failures by trials of new seeds, plants, and new methods of culture. But my design is not to discuss this point, but to give some items in regard to the Sorghum that may be of use to those interested, premising that I have nothing especially new to offer.

All agree that it is important to have it fully ripened. To attain this it is of course necessary to plant early, and it can be planted as early as corn. It should be cultivated well during its first growth, but when well started it should be let alone—it will take care of itself, and ripen the earlier. To this end it should, also, be planted on high and not rich ground. The best quality of syrup has always been produced, according to my observation, on poor sandy soil, and the poorest on rich and wet soils. Nor is the quantity of syrup from these poor soils so much less as might be supposed, than from the richer soils, although the quantity of stalks may be much larger from the latter.

The cane may become over ripe, as in my own instance the past season. My cane was in best condition from September 20, to 1st October. On cutting from same October 11th, found an evident loss in amount of juice, and the saccharometer only marked six and a half degrees, a loss of 50 per cent. The syrup from this cutting was the best I have made.

I found no advantage in stripping off its leaves for a week or two before cutting. No difference in quantity or quality of juice was perceptible between that stripped or unstripped.

A very important thing to be guarded against, is its being planted near enough to broom corn or other varieties with which it can mix. This has been repeated again and again, yet already much evil has been done through inattention to this point. I have made a lot that yielded less than half an average amount in consequence. It is liable to mix at a quarter of a mile distance.

Now as to cost of raising and profits: I find, when planted in hills as corn, and cultivated in like manner, that it will produce 200 gallons per acre. An acre of corn can be raised for $4 00—to this add $2 00 for an additional hoeing. The seed and fodder will pay for stripping, cutting and hauling to mill Having made some 1500 gallons the past season, under great disadvantages, hiring the work all done at high prices, I found it cost me only ten cents per gallon for manufacturing. So we have as cost of molasses—three cents for cane and ten cents for manufacturing—in all thirteen cents. Look at this:

Dr.	*One*	*Acre.*	*Cr.*
Cultivating,..........	$6.00	200 gallons at 40c.,..	$80.00
Manufac'g. 200 gall,..	20.00	Expenses, ...	28.60
5 bbls. 40c.,..........	2.00	Profit on one acre, ..	$52.00
	$28.00		

Now let me make another calculation. Instead of planting in hills as corn, let it be planted in drills and well cultivated. In this way I am satisfied that 300 gallons may be had from an acre. Say that the additional labor bestowed on this will make it cost $9.00 per acre. Now I am certain that by manufacturing on a larger scale than I have done, getting it done at fair wages for hands, horses, or better still, steam, it can be made for two-thirds of above cost, say seven cents, making in all ten cents:

300 gall. at 10c. will be	$30.00	300 gall. at 40c.,......	$120.00
7 bbls.,..................	7.00	Expenses,..........	37.00
	$37.00	Balance..............	$83.00

But even at low price of twenty-five cents per gallon, it will leave a profit of $38.00 F. *Vigo Co., Ind.*

Simple and Cheap Stump Machine.

Messrs. Editors—I send you this description of a Stump Machine, thinking that if you see fit to publish it, it may be of use to some of your subscribers. It is very simple and any farmer can make it.

First, take a piece of oak, well seasoned, and reduce it in size to the width of his cart tongue, and from 4 to 5½ inches in thickness; then go to the blacksmith and get some iron straps made—also get two straps with hooks on them. Next, fasten the timber to the tongue and put on the straps (the ones with the hooks) at each end, with the hooks down. All being ready, take a tackle and some chains, yoke up your oxen, and go to your stumps. This timber should be made so as to be taken off again, and should be made so as to yoke your oxen on to it.

First pass a chain around a root of a stump; then raise the tongue, which can be done either by hand or a small "pair of shears," as you would to load a log, and hook on the chain. Fasten the lower block of the tackle to a stump or something else; hook on your oxen and drive off, and if your stump don't come out, it is different from mine.

It is no more trouble to raise the tongue by hand, than where you pull the stumps by shears, than it is to raise them, and I don't think it is as hard work.

I have never seen anything like it, and all that have ever seen it say the same.

The great trouble with such machines, is that they are very complicated and costly, which is not the case with this, for the actual cost cannot be over ten dollars, except for the wheels, which every farmer is supposed to have, and the power that it will exert is very great, more so than you would think at first, as you will see.

Let us suppose the stick or lever to be 18 feet long the long way, and two feet the short way. Then the force of one pound on the rope, supposing the tackle to have four ropes, would exert the force of thirty-six on the stump, and if the oxen could pull one ton or two thousand two hundred and forty pounds, they could raise eighty thousand six hundred and forty pounds or thirty-five tons, two hundred and twenty-four pounds; force enough to rend the stump to fragments. If more force is required, you could lengthen one side of the lever and shorten the other—thus call the lever nineteen feet and one foot, you would then have a force of over seventy-five tons. H. *Richmond, Me.*

* * *

Penn. State Ag. Society.—The annual meeting of this Society was held at Harrisburg Jan. 18th, when David Taggart of Northumberland county was elected President, with 25 Vice-Presidents—A. Boyd Hamilton, Sec'ry—Prof. S. S. Haldeman, Chemist and Geologist, and Henry Gilbert, Librarian.

New-Jersey State Ag. Society.—At the annual meeting at Trenton, Jan. 18, the following officers were elected:

President—Gov. Wm. A. Newell.

Vice-Presidents—1st District, Jeptha Abbott; 2d, N. S. Rue; 3d, A. V. Bonnell, 4th, Henry Hilliard; 5th, Lowell Mason, Jr.

Secretary—Wm. M. Force.

Treasurer—C. M. Saxton.

☞ At the annual meeting of the Bainbridge Agricultural Society, held Jan. 15, 1859, the following officers were elected for the ensuing year:

President—Ira Hyde.

Vice-Presidents—Oliver Somers, J. B Sands, Robert Pearsall, A. N. Humphrey, Ira Bennett, and Tyler Johnson.

Secretary and Treasurer—Jos. Juliand 2d.

Managers—John Banks, Charles Bixby, Nelson Ireland, Walter Higley, John Sanders, and Daniel Bristol.

Share's Harrow, Pulverizer, &c.

Messrs. L. Tucker & Son—As many of your readers doubtless consider, as I do, that every machine which has for its object, and *really* is a saving of time, labor and expense, is of vital importance to them, I will state my experience in the use of D. W. Share's patent Potato-Covering, Hoeing, Cultivating and Hilling Machines, and also his Coulter Harrow and Sod-Pulverizer, and Grain Coverer.

I first saw these machines in May last, when one of Mr. Share's agents came to my place with them, and requested me to try them. I did so, and after a short trial, I was so well satisfied with the manner in which they worked, that I purchased a set of them, as did some twenty or twenty-five of my neighbors. I used them in working my corn and potato crops, with very little hand-labor, part of my land being stumpy. Many of my neighbors worked their crops exclusively with them, to their entire satisfaction.

The Coulter Harrow is decidedly the best machine for pulverizing land and covering grain, that I ever saw. I got one of them in the latter part of June, after my land had been prepared for spring crops, and had but little opportunity for trying it until preparing my land for buckwheat. This land had been plowed about the first of May when it was wet, and at the time I used the Harrow upon it, was very hard, and its operation satisfied me that no other Harrow or Cultivator could have done the work so well or so easily. Instead of cross plowing my summer fallow, as I generally do, I pulverized the soil to the depth of from five to seven inches with this Harrow, and after sowing my grain broadcast, I covered it with the same machine. The appearance of my crop last fall, satisfied me that the use of the Coulter Harrow had added much to its growth, as the old sod had been left where it should be, to nourish the roots of grain. John McHarg. *Bethlehem.*

Hen Manure for Indian Corn.

Messrs. Editors—In an article in the Country Gentleman of the 30th of December, headed "Reader, will you write for us?" you furnish a list of subjects on Indian corn, fourteen in number, on each of which you invite your readers to give their experience. I think this idea of furnishing subjects a happy one, and on each of these connected with Indian corn, which, in this section of the country, has now become the most important and reliable crop, many farmers ought to have some experience to communicate, which might be interesting to your readers. I agree with you that each subject is enough for a single communication; I will therefore confine myself to giving my experience on No. 5 On cleaning out my hen-house last spring I had more than a wagon load of clear hen manure. I drew this into my barn intending to drop it on the hills of corn as soon as the corn made its appearance. I planted one acre on the first of May, but after that the weather was so unfavorable that it was the end of May and beginning of June before I got through planting. Long before this the manure began to heat at such a rate that I had to unload it on to the barn floor, and on going into the barn in a few days after, the effluvia from the escaping ammonia was so powerful that I was glad to escape from the barn. Having some plaster on hand I mixed it thoroughly with the manure, spreading the latter thinly over the floor and bruising and chopping it very fine. It was then thrown into a heap and remained on the floor until the corn was ready for it, and there was no further preceptible escape of ammonia. With this I top dressed all my corn, eleven acres, and had a barrel left over for other purposes. So well satisfied am I with the result that for the future I intend to prepare my hen manure in the same way and apply it to the same crop. I mixed enough plaster with it to make it dry and quite inoffensive to handle. I can speak of this from experience, as I dropped it over four acres myself. Now here is a manure equal in value, I doubt not, to the average of imported guano, which every farmer can manufacture for himself, for every farmer keeps fowls. But he must have a suitable building for them, and not allow them to roost all about his premises and even in trees, wasting that valuable manure, as is too often the case So highly do I esteem this manure that I make it my business every night to see that all my fowls are within their proper house. C. B Meek.

Cure for Scab in Sheep.

Eds of Co. Gentleman—In some of your late numbers, inquiry is made for a remedy for scab in sheep. I have had this disease break out several times among my sheep, and have never failed in effecting a cure by the application of tobacco juice. If taken in time, the cure is quite easily effected; but if allowed to spread among the flock, it is a work of considerable labor. Wash the parts affected with a pretty strong decoction of tobacco, and repeat every two or three days until the skin of the animal resumes a healthy state. It is a sure cure. An extensive farmer in this vicinity, who kept several hundred sheep, had the scab among his flock, and allowed it to be spread so extensively that many of them were covered with the eruption to the ears and eyes, and the only way that he could devise to make a speedy cure was to fill a large cask with the decoction, and immerse each sheep, merely allowing a sufficient portion of the head out for breathing.

No time should be lost; apply the remedy immediately. R. M. Conklin. *Cold Spring Harbor, L. I.*

Cattle Sale.—It will be seen by an advertisement in this paper, that Mr. Taber of Dutchess county, proposes to sell his fine herd of Short-Horn cattle at auction early in May. Both the bulls mentioned, were bred by Mr. Thorne, and have received prizes at various exhibitions, as have also several of the cows and heifers.

☞ The Indiana State Ag. Society are to hold their next Fair at New Albany, from Sept. 26, to Oct. 1.

Rutland Co. (Vt.) Ag. Society.—Officers selected for 1859:

President—Daniel Kimball, Clarendon.
Vice-Presidents—Hon. C. S. Rumsey, Hubbardton, and Alpha H. Post, Rutland.
Secretary—Henry Clark, Poultney.
Cor. Sec.—Dr. Orel Cook, Jr., Rutland.
Treasurer—Hon. Zimri Howe, Castleton.
Auditor—Ward M. Lincoln, Brandon.

☞ At the annual meeting of the Ag. Society of Montgomery County, Pa., held Feb. 14, 1859, the following gentlemen were duly elected officers for the ensuing year:

President—W. B. Roberts.
Vice-President—Samuel Roberts.
Treasurer—D. C. Getty.
Rec. Sec.—Geo. F. Roberts.
Cor. Sec.—A. W. Corson, Plymouth Meeting P. O., Mont. Co., Pa.
Executive Committee—S. H. Stout, John Bickings, Joseph Shannon, Benj. Baker, George Gaetrell, William Michener, John Shepard, and Seth Lukens.

☞ We learn that Jos. Juliand, 2d, of Bainbridge, has just sold the young Short-Horn bull "Mahomet," bred by him, to Spencer F. Allis, Coventry, N. Y. "He is a very promising calf, and bids fair to equal his sire, "Sultan" 2270½, in form and size."

Composting Bones—Manure for Corn.

For a number of years I have had about a ton of coarse bones, and after trying various ways of applying them as manure, I settled down upon the following unscientific way of composting them:

I first soften the bones with salted ley, until they can be crushed with a wooden beetle. After they are crushed, I mix well together one part bones and three parts wood ashes, slightly damp the whole—then pile it up in a heap. The heat should be trod together very hard. After two days the heap should be mixed with ten or more times its bulk of peat or pond mud. I usually compost it in October, shovel once in November, and use to top dress my cornfield the next spring I have used it three years in succession, and it has paid the best of any manure I have ever used.

I am aware that many will condemn this way of composting bones on account of the waste of ammonia, but it seems to me that the wasted ammonia is more than compensated for in the increased value of what there is left. Bones and ashes prepared in this way, cause a pile of mud sixteen times their bulk, to heat, and the bones will nearly all crumble to powder before the next spring. I never could succeed in making bones prepared in any other way, do so. I have read with much interest several articles in the COUNTRY GENTLEMAN upon prepared bones. One article, by Mr. BARTLETT, if I recollect right, gave an account of his boiling bones once in ley. The ley he used was probably too strong; the bones should not have been heated hot enough to have boiled at all I could see by his article, that he lacked the thirty years experience that I have had in boiling bones as plainly as he will see, if you print this article, that I lack his ability to write for the COUNTRY GENTLEMAN. E. W.

Cranberries on Dry Upland.

MESSRS. EDITORS—Having seen several notices of cranberry culture in your paper, I send you a short statement of recent trials on Long-Island, which are interesting, chiefly from the fact of the successful cultivation of this valuable fruit on land perfectly high and dry.

If cranberries can be raised in any ordinary garden as herein described, it is a matter of some importance to know it.

The following letter from Mr. J. H. W., relating to this subject, tells the story. Mr. W. wishes not to have his name in the papers, but consents to the publication of the facts:

"Yours of the 27th Nov. is received. You wish to know how my cranberries turned out. I will give you a short history of my cranberry cultivation. After all the information I could get, about soil, location and profits, I obtained plants, and started an eighth of an acre two years ago last spring; and by the way the plants grew and flourished, I became satisfied it would pay, and made it up to one acre—part of it a year ago last spring, and the balance this last spring. You see by this account, that only the eighth of an acre came into bearing the past year. True, I gathered a few berries last year, but this is what cultivators call the first bearing year, and I am informed they are not in their prime until the plants are five or six years old. I know nothing about it by experience myself, but state the information I have received from others.

"Now for the facts that came under my own observation. Since I saw you, I have received account of sales, and also received the money for the product of the eighth of an acre. After all expenses paid, freight, commissions, &c., I received $14.50—at this rate an acre, the third year from planting, will pay $116.

"Now one fact must be borne in mind. I was unacquainted with the cultivation of them, and I am satisfied, to begin with, I did not get the best variety of vines; the Upland is the best I bought mine for the upland, but am convinced I did not get them. In the next place experience has taught me I did not give them proper cultivation. I am now satisfied that with the upland vines, and proper cultivation in the beginning, that the third year the yield will be full $200 per acre. J. H. W. *Dec* 6, 1858."

The details of the culture, such as the preparation of the ground, and the particular time and manner of setting out the plants, and their care, are not given in the above letter, but I am informed by Mr. W. that no manure or fertilizers of any kind were applied to the ground. The land is in the midst of the wilds of Long Island, and what has heretofore been regarded as utterly barren and worthless. The spot on which this experiment was made, is in Islip, about 48 miles from Brooklyn, and about two miles south of the L. I. R. Road, being about half way from the Rail Road to the the south shore of the Island, on land entirely high and dry, being 70 or 80 feet above tide water. The well on the place, near the Cranberry bed, is 40 feet deep. The surface of the land is level. I mention these facts, to show that it is not the kind of land on which it has been commonly supposed cranberries could be raised.

The soil is a fine warm loam, such as almost any man would, on seeing it turned up, select as being choice or the finest kind of garden land. The piece on which the cranberries are, was simply cleared of the the small roots, and the vines set out: the large stumps are yet standing in the ground.

I will also state that a neighbor of Mr. W., seeing the growth of the vines, and not feeling able to purchase plants, went on to the borders of the Connetquot river, a stream running into the Great South Bay, where the native cranberry vines are abundant, and took up a quantity from the low wet ground, and transplanted them into his garden; and I am informed that they are perfectly successful; that they have grown thriftily, bear well, and fruit of excellent quality. I am told the owner thinks these native vines taken from the borders of the stream, are better than those purchased and brought to the Island, by Mr. W.

I saw W.'s vines, in October last; they had entire possession of the ground, literally covering it—no weeds nor grass among them, and they were full of fruit. E. F. PECK. *Brooklyn, N. Y.*

Flatulent Colic in Horses.

MESSRS. EDITORS—In your issue of October 8, I notice a remedy for Flatulent Colic in Horses, very simple and no doubt very good. As the ingredients may not all of them be at hand when wanted, permit me to communicate one equally simple, and at all times accessible in almost every house in the land. This is simply to make a drink of any of the green teas of a strength compared with that for family use, proportioned by the additional size of the animal, and give it cool. Relief will speedily follow. If a teacupful of molasses is added to the tea, it may be well, but is not essestial. Keep the animal stirring until relief is very certain. We have seen it tried with entire success in many instances.

In a late instance, where the horse had refused to stand, two doses were found necessary, and in fifteen minutes after the administration of the second, the horse began to eat. The quantity of tea used was about three ounces.

For a drench to follow, molasses and lard mixed by warming, is very good. W. B.

Inquiries and Answers.

TIMBER FOR UNDER-DRAINING.—I wish to know if logs, when hewn or sawed square, or even plank nailed together in the form of a log, might not be overlaid with water-lime cement, and profitably used, instead of stone, for underpinning buildings, where stone are very scarce and timber plenty. Would the timber shrink and swell, and crack the coating so as to let in air and moisture, and rot the timber. J. M. Y. [If the whole surface of the timber were covered with a coating of the water-lime mortar, it would not adhere well, and would after a while crack off. Moisture would enter or pass off at different times, swell and contract the timber, and all would become finally exposed. Parts near the surface of the earth, would be still more affected with moisture, and freezing and thawing such portions of the mortar, would accelerate its destruction. If we were compelled to use timbers at all, we would lay them in common lime mortar in which there was a large portion of lime, which, entering the pores of the wood, would serve to preserve it. Applying lime wash to the outside of the timbers, would promote the same end—the lime wash being colored brown by ochre or earthy paint, to prevent a bad appearance from the dead whiteness of the lime.]

CHLORIDE OF LIME.—Will chloride of lime neutralize all offensive odors, if applied to vaults of privies—and if so, what does it cost? J. M. Y. [Chloride of lime tends to destroy all bad odors, especially vegetable—it is cheap, but we do not know its wholesale cost. For privies it would not answer well, without enough for changing the nature of all the contents. A much cheaper mode of destroying all the odor is to sprinkle in daily a few quarts of coal ashes, which simply absorbs all, and renders them dry and inodorous. Pulverized charcoal is still better when it can be had, and even dried peat does tolerably well.]

SALT IN THE SOIL.—Is there any manure or cheap chemical agent, that will restore the productiveness of ground rendered unproductive by becoming saturated with common salt? [Nothing so cheap nor so good as *water*, which will dissolve one-third of its weight of salt—and if there is subsoil drainage, the rains will soon wash it all out.]

CROOKED HORNS.—J. S. GRENNELL inquires how to scrape his steer's horns to make them grow in the right direction. Scrape in the opposite direction from the way you want them to grow—if to turn up, on the under side—if out, scrape the inside—if long and thrifty, give them roots or meal. H. P.

DITCHING PLOW.—*J. B. Tibbits*, *J. H. Eaton* and others. The ditching plow, the successful operation of which was described by us a few weeks since, answers well as a subsoil plow for ordinary purposes—we know of none to exceed it in this respect. After trying various modes, from the use of a $150 ditching machine, downwards, we find this the simplest and most economical instrument to assist in cutting drains, independently of its low cost. The last number of the Illustrated Register points out several modes for filling drains cheaply.

WALLING A SPRING.—*A. W. B.* A reservoir may be built of stone about a spring, in order to raise the water, by laying the stone in water-lime mortar. The sides should be well banked up with several feet of earth, and the top also as well covered as practicable, for if the mortar freezes it will crack and leak. If the interior is always full of unfreezing water, this will be a protection to the inside wall. Unless all these requirements can be properly complied with, it would be better to lay up the stone as commonly in stoning wells, and form a thick bank of compact clay around the stones, covering the whole with sod.

GRAIN FEED FOR CATTLE, &C.—I have a stock of cattle of various ages, in as good condition as cattle will average. My hay is as good as average. How much grain per day can I feed to each creature at a profit? [We are not aware of any accurate experiments to settle this question. It is a common opinion, however, that it is not profitable to feed any quantity of grain to store cattle.] Should a cow's tail be cut off when the hair on the end twists? E. W. [No.]

ANNUAL REGISTER.—*D. M N.*, *Lewisburg*, *Pa*—We can send you any or all the numbers of this work—price 25 cents each.

BEST FARM DOG.—I would say to L. F. D., page 49, that my idea of a dog for a farm, is a rough or fox Terrier—say to stand about 20 inches in hight, and to weigh 35 to 40 lbs.—if properly taught, a dog of all-work. A Newfoundland, if kept tied, will make a great noise, but if left to run, are for the most part, good scavengers, and are always under-foot when not wanted. I find the Terrier equal in all respects to any other breed, for spunk and perseverance, and for outside farmers they cannot be valued too high—have proved themselves good for the churn, and are death to all small pests. N. J.

CORN AFTER TURNIPS.—I have commenced a rotation of, first, corn; rye hoed in, in August; pasture the rye until the next July; then plow and apply a good top-dressing, and sow grass and turnip seed. A heavy crop of turnips can be harvested in November, and the grass is none the worse for the turnips that I can see. I would like to know if the crop of turnips will affect the next crop of corn if the field is in grass three years? E. W. *Kingston*, *Mass.* [Probably not.]

SWEET GERMAN TURNIP.—These came up finely, but were immediately attacked by a small black bug, which, in spite of all my efforts, destroyed perhaps nineteen-twentieths of them. I succeeded, however, in raising a number of bushels of most beautiful and delicious turnips. They are altogether superior in flavor to anything I ever raised in the turnip line. Can you, or any of your subscribers, tell me how to destroy the said bug? J. H. W. *Gustavus*, *Ohio*.

LUMP ON THE JAW OF A COW.—I would say to W. C. A., Jr., that if the wen or lump under the jaw of his Durham cow is attached to the bone, any attempt to remove or check it will be unavailing. If it is loose from the bone, an application of Iodine might probably be beneficial; but most likely the advice that Youatt gives in such cases would be the best—that is, to get the animal into the hands of the butcher as soon as possible; but whenever the lump discharges matter, the effort to improve the animal's condition is hopeless. J. COPE. *West Chester*, *Pa.*

EQUATION OF TIME.—What is the variation from the true time expressed in your Almanac, at this point, viz: Latitude 44° 45′ N, Longitude 91° 20′ W. A. G. M. [We do not perhaps understand our correspondent. Sun time varies from mean time differently on every day of the year, from nothing at some periods, to about 16 minutes at others; and this variation is not affected by latitude or longitude, but is the same at the same moment in all parts of the country.]

GRAFTING PLUMS, &C.—Can plums, peaches, and cherries be grafted with success? If so, what is the best method of grafting them, and when is the best time to do the work? A. H. A. *Belmont Co.*, *Ohio* [Plums and cherries may be grafted with success, but not peaches, although the latter sometimes succeed under peculiar circumstances. If the stocks of the plum and cherry are large, they should be cleft-grafted; if small, they may be tongue-grafted. Cherries will not succeed unless grafted very early, or even before the frost has escaped from the ground in spring; and plums do best if the work is done nearly as early.]

PEARS ON QUINCE.—Will you tell me which is best to do, graft my Angers quince this winter with pear, or bud them next summer? (1) Will the little dwarfs dare to give me fruit after being called such names? (2.) What are a few of the best kinds of pears for the quince? (3.) M. [(1.) Bud them next summer. (2.) Fortunately, they have not the vanity and weakness of human beings, and disregarding all calumnies, show by their *fruits* just what they really are, without a contentious word. (3.) The best sorts on quince are Louise Bonne of Jersey, Urbaniste, Angouleme, Diel, Glout Morceau, Winkfield, Beurre Superfin, &c.]

STRAWBERRIES FROM SEED. -Will you inform me when is the proper time to sow strawberry seed. J. B. S. *Anderson, S C.* [Wash the seed well from the fresh ripe fruit, and sow immediately—the soil must be light, rich and shaded from the rays of the sun except in the morning; covering them with fine mould]

CORN CULTIVATORS.—*M R. D* For the labor commonly performed by cultivators, we have never found any in our own experience equal to those made by SAYRE & REMINGTON of Utica, for cheapness, strength, durability, and efficiency, combined. The teeth are made of steel, and continue sharp till quite worn-out. For performing the labor of hoeing, and covering short weeds among the corn plants, we are inclined to believe, from some practical trial, that *Wetherell's Patent Horse-Hoe*, which we described last autumn, will prove a valuable and labor-saving implement, wherever the ground is not excessively stony. It pulverizes and scatters the soil in among the young plants in an efficient manner.

CROOKED HORNS, &c.—J. S. GRENNELL may be informed that the crooked horn must be scraped on the side opposite that towards which he wishes it to incline —that is, if he wishes it to turn up, scrape (or shave) the lower side, rubbing on some oil afterwards, to facilitate the growth of the side that is scraped. CHARLES RICHARDS.

And now please inform me why my cattle rub off the hair from various parts of the head, leaving the skin, which is thus exposed, very dry and scurfy. It cannot be attributed to lice, or want of shelter, or food, or litter,—and is spreading from one to another through the herd. What is the cause? and what would be a preventive or remedy? C. R. *Bristol, Ct*

COMPOST FOR GARDENS.—My neighbors often are benefited by your advice in THE CULTIVATOR, and I beg your aid too. My garden and farm are gravelly, and the roads are made of clay carted some distance. There is no muck to be had within five miles. What shall I use to make a compost with my manure heap? What shall I add to my hen manure to make it good for my corn and potatoes next May? It is likely many would be benefitted by your directions on these two points, as well as AN OLD SUBSCRIBER. [Clay is a very poor material for roads, and gravel the best. For light gravelly gardens, a compost is desirable that contains considerable clay. Instead therefore of carting clay to the roads, let it be used in alternate layers with manure as a compost for light soil. Loam, clay, or turf, are either of them as good as muck as a constituent for compost, so far as absorbing the volatile parts of the manure is concerned. For light soils, clay would be best, and for those of a heavier nature, turf would be better. Adding the hen manure to this heap of compost would retain all its valuable parts.]

GRAFTING-WAX—GRASS SEED.—Will you please inform me the mode for making grafting-wax, and the most proper time for spring grafting? Also, the amount of timothy and clover seed to be sown per acre, on land where the timothy will run clover nearly out, in three or four years? M. P. D. *St. Armand, C. E.* [A good and cheap grafting-wax is made by melting together and mixing well, 4 lbs. rosin, 2 lbs. tallow, 1 lb. beeswax. These three ingredients are used in various proportions by different propagators—sometimes in equal quantities - sometimes 8 parts rosin, and 3 each of tallow and beeswax—or 8 parts rosin, 5 of beeswax, 3 of tallow, &c. By using lard instead of tallow, as it is softer, more rosin may be employed. A mixture of equal parts of clover and timothy, at the rate of a peck or more per acre, will furnish a good seeding.]

SORGHUM MILLS.—A correspondent desires information as to which is the best mill for pressing the Sorghum. Any reliable information on the subject, will be interesting to many of our readers.

NANSEMOND SWEET POTATO SEEDS AND PLANTS.—Seed $5 per barrel. Plants, at proper season, $2 per 1000—$1.50 when 10,000 or more are taken—packed so as to go to all points in the North where Expresses will carry. For information relative to propgating, planting, &c., and statements from those who had our plants the past season, address, with stamp,
O. S. MURRAY & SON,
Mar1—m1w5t Twenty-Mile Stand, Warren Co., Ohio.

VALUABLE STOCK HORSES FOR SALE.—The subscriber offers for sale, two fine Black-Hawk Stallions, both sired by old Black-Hawk, and from superior mares. One weighs 1,000 and the other 1,200 lbs.; both black without marks. They are five and six years old, kind and gentle; have proved excellent stock-getters. I have also a promising two-year-old Stallion of the Black-Hawk stock, and a Morgan of the same age. Also several Fillies of from one to four years old. Will sell any of the above-named at low prices. Address
JNO. JACKSON,
Mar. 1—w&m1t Brandon, Vt.

SHORT-HORN HERD AT AUCTION. Having sold my farm at Chestnut Ridge, Dutchess county, N. Y., I will offer for sale at auction, my entire Herd of Short Horned Cattle, consisting of about 35 head superior animals. Among them will be the unrivalled Bull "*Highflyer*," 578; also, stock sired by him, as well as the "*Earl of Warwick*," 465. The sale will take place at Dover Plains, on the New-York and Harlem Rail Road, on the 10th day of May next, at 12 o'clock.

Catalogues of Pedigrees may be had after the 10th day of March, at the offices of the *American Agriculturist*, New-York; *Country Gentleman*, Albany; *Ohio Farmer*, Cleveland; *Boston Cultivator*, and of the subscriber,
SAMUEL T. TABER,
Mineola, Queens Co., N. Y.

P. S. No animals will be disposed of before the sale at auction. Feb. 24—w10tm2t

SEEDS!—SEEDS!!—SEEDS!!! The subscriber has now in store, his entirely new stock of GARDEN, FIELD and FLOWER SEEDS. The very superior quality of the following, is particularly recommended, all of which are required early:

Broad Windsor, Mazagan, Long Pod, and Nonparcil Beans, each per quart,	20	cts.
Extra Early and Blood Turnip Beet, each per oz.,	10	"
Early Purple and White Brocoli, each "	30	"
Early Winingstadt, London, and Ox-Heart Cabbage, each per ounce,	20	"
Early White and Giant Solid Celery, each per oz.,	20	"
Ex. Early Forcing and Early Horn Carrot, "	10	"
Ex. Early Paris and Thorburn's Nonpareil Cauliflower, each per ounce,	80	"
Early Frame Cucumbers, per ounce,	10	."
Improved New-York Purple Egg Plant, "	80	"
Early White Vienna and Large White Kohl Rabi, per ounce,	20	"
Silesia, India Head, Batter, and Simpson's Improved Lettuce, per ounce,	20	"
Extra Double Curled Parsley, per ounce,	10	"
Extra Early Daniel O'Rourke Peas, per quart,	30	"
" Sangster's No. 1 Peas, "	30	"
" Canada Peas, "	25	"
" Tom Thumb Peas, "	75	"
Fairbeard's Champion of England Peas, "	30	"
Napoleon and Eugenie Peas, each "	50	"
Epp's Monarch & Lord Raglan Peas, each "	75	"
Harrison's Glory and Perfection Peas, each "	40	"
Cherry. Cayenne, Bell and Squash Pepper, ⅌ oz.,	40	"
Early White and Scarlet Cherry Radish, each "	10	"
London Particular Long Scarlet " "	10	"
Christina Musk Melon, (true,) per ounce,	40	"
Round Savoy Spinage, per pound,	60	"
Early Red Smooth and Large Red Tomato each per ounce,	25	"
Early Garden Stone Turnip per ounce,	10	"
The Celebrated Hubbard Squash, per ounce,	20	"
Twenty-five varieties of choice Flower Seeds for	1.00	

With a large and choice selection of seeds generally, for which referrence is made to my Retail Catalogue just published, which will be mailed to address, enclosing a one cent stamp.

For sale, 100,000 choice plants of the celebrated WILSON'S ALBANY SEEDLING STRAWBERRY. Price $2.00 per 100—7.50 for 500—$10.00 per 1000, including packing.
WILLIAM THORBURN,
Albany Seed Store,
March 1—w3tm1t 492 Broadway, Albany, N. Y.

PRINCE ALBERT POTATOES.—

The subscriber has completed arrangements, and offers for sale the above valuable potato, which can be relied upon as the GENUINE ARTICLE. Price $2 per bushel—$5 per barrel (of nearly 3 bushels.) Ready for delivery about 1st April. WILLIAM THORBURN,
Feb. 24—w3tm1t 492 Broadway, Albany, N. Y.

D. L. HALSEY, DEALER IN *CRANBERRY PLANTS*,

Victory, Cayuga County, N. Y.

☞ PRICE—$1 per Hundred—$6 per Thousand.
Feb. 24—weow6tm2t

NEISHWITZ' MOWER AND REAPER.

Buckeye Mower and Reaper.

For sale by A. LONGETT,
Mar. 1—m3t | ap. 7—w4t 34 Cliff-st., New-York.

ELLWANGER & BARRY'S old established

"*Mt. Hope Nurseries*," Rochester, N. Y. Orders received at *Agricultural Depot*, 100 Murray-st., New-York.
Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

BAKER APPLE GRAFTS

by Mail, post-paid—30 cents per doz. Send stamps.
F. A. ROCKWELL,
Mar. 1—w4tm1t Ridgefield, Conn.

MAPES' NITROGENIZED SUPERPHOSphate of Lime

—also first quality of Peruvian Guano, for sale at *Agricultural Depot*, 100 Murray-st., New-York.
Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

WILSON'S ALBANY SEEDLING.

The Best and most Prolific Market Strawberry! *Yields* 150 *to* 200 *Bushels per Acre!* Genuine Plants of this superior variety for sale, in large or small quantities. Price, $10 a thousand—$1.50 a hundred, or $1 for fifty.

Red Antwerp Raspberry canes, $4 per 100—$2.50 for 50, or 16 for $1.

New-Rochelle (or Lawton) Blackberry canes, $10 for 100—$6 for 50—$3 for 24—$2 per dozen

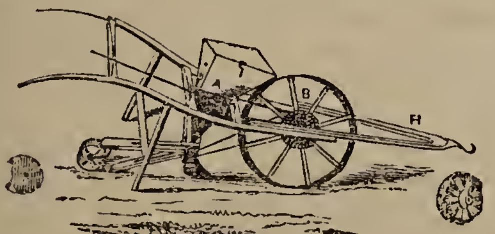
All plants ordered, securely boxed and delivered in Albany, without extra charge.

Orders accompanied by cash promptly attended to.
WM. RICHARDSON,
Mar. 1—m1t 96 South Pearl street, Albany, N. Y.

FOR SALE.—100 BARRELS PURE *PRINCE ALBERT POTATOES.*

50 bushels Rough Purple Chili Potatoes.
50 bushels Peach Blow Potatoes.
10 bushels New-Hartford Potatoes.
10 bushels Garnet Chili Potatoes.

Warranted Genuine, and have never been known to rot in any soil. Price $5 per barrel or $2 per bushel.
F. W. NOBLE,
Mar 1—m3t Easton, Pa.



ALBANY SEED PLANTER *AND DRILL BARROW*,

Manufactured by Pease & Eggleston, Albany, N. Y.

Directions for Use accompany each Machine.

The above cut represents the latest and most approved Seed Planter now in use; as seen in the cut, it can be used with or without a horse. Its capacities are as follows: 1st. For planting in *hills*, it admits of twenty-four variations in distance between the hills; the smallest being three inches apart, and the largest eight feet apart. 2d. The number of seeds to the hill can be varied from one to any required number. 3d. For drilling, it admits of twenty-four variations, thus adapting it to every description of small seeds. 4th. It will plant any required quantity of carrot, onion, and other small seeds per acre, from ¼th to 10 pounds. Price $14. Feb. 10—w4tm1t

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NOTICE OF PARTNERSHIP.—

The undersigned have this day formed a Limited Partnership for the period of five years from the 27th day of January, 1859, under the name or firm of HENRY F. DIBBLEE, for the purpose of dealing in or manufacturing *Agricultural Implements, Machines, &c.—also sales on commission.* Henry F. Dibblee is the General Partner, and Charles A. Griffin, who is the Special Partner, has contributed Eight Thousand Five Hundred Dollars in cash. Dated New-York, January 27, 1859.
(Signed) HENRY F. DIBBLEE,
CHARLES A. GRIFFIN.

The business will, as heretofore, be conducted at *Agricultural Depot*, 100 *Murray-st., New-York*, where an increased variety of *Implements, Machines, Seeds, Fertilizers, &c.*, will be found. March 1—m1t | mar 2—w1t

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PERUVIAN GUANO.—

No. 1 Peruvian Guano, Government Brand and Weight, direct from the Peruvian Agents, at the lowest market price, in quantities to suit purchasers. Send for a Circular. A. LONGETT,
Mar 1—w&m3ms 34 Cliff-st., New-York.

ELLIOT'S WESTERN FRUIT BOOK.

A new edition of this work, thoroughly revised, embracing all the new and valuable Fruits, with the latest improvements in their cultivation, up to January, 1859, especially adapted to the wants of *Western Fruit-Growers*, full of excellent Illustrations, by

F. R. ELLIOTT, Pomologist,

Late of Cleveland, O., now of St. Louis. Price $1.25. Sent by mail, post-paid, to any part of the United States, on receipt of price. A. O. MOORE & CO.,
Ag. Book Publishers,
Feb. 24—w2tm1t 140 Fulton-st., New-York.

MAPES' CELEBRATED ONE-HORSE

Steel Subsoil Plow, for deep cultivation of crops during their growth. Also the same pattern, *three larger sizes*, for deep subsoil plowing. For sale at Agricultural Depot, 100 Murray-st., New-York.
Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

COMMERCIAL AGENTS WANTED.

Able and honest men from New-England or New-York. A. W. HARRISON, Philadelphia, Pa. feb 10—6*

AMERICAN WEEDS AND USEFUL PLANTS, *OR AGRICULTURAL BOTANY*,

By W. DARLINGTON, M D., West Chester, Pa., with additions by GEORGE THURBER, New-York. A History and Description of all plants injurious or important to the American Farmer and Gardener; with nearly *Three Hundred Illustrations.*

The Weeds which now infest our farms, have, with few exceptions, been introduced from abroad; and being at first unnoticed, have spread from farm to farm, until it now costs the Farmers of America, *millions of dollars every year*, for the destruction of these foreigners, or in the injury done to their crops. Every Farmer should guard his grounds from the *first approach* of his enemies.

As a class-book for Agricultural Schools and Colleges—and a Hand-book for the Farmer, and for all public and private libraries, this book is the most valuable addition yet made to our already large list of Agricultural Books.

Price $1.50. Sent by mail, postage paid, on receipt of price. A. O. MOORE & CO.,
Ag. Book Publishers,
Feb. 24—w2tm1t 140 Fulton-st., New-York.

COLEMAN'S FARM MILL,

Cornstalk Cutter and Grinder—(Hickok's Patent.)

GRIFFING BROTHER & CO.,
60 Cortlandt-st., New-York City.

Farmers sending us their address will receive our *Illustrated Catalogue and Almanac* for 1859. Dec. 9—w&m3m

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NO. 1 PERUVIAN GUANO,

"Hoyt's" Superphosphate of Lime,

Bone Dust, Plaster,

Poudrette, Tafeu, &c.

The above Fertilizers *warranted* pure, and sold at the lowest market price.
GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., N. Y. City.

Notes for the Month.

DAVIS' SEEDLING POTATO.—We are indebted to J. S. GRENNELL, Esq., Secretary of the Franklin Co. Ag. Society, Greenfield, Mass., for a barrel of these celebrated potatoes, which we regret to say, were so badly frozen on the way to us, as to prevent our judging of their quality. Mr. G. says—"The Davis Seedling originated in the eastern part of Massachusetts, about five years ago, and is now the most popular potato in the State; and considering its great yield, its uniform size, entire freedom from rot, and its dry mealy character when cooked, is at present the best potato in the United States."

FARMING IN VERMONT.—We are inclined to think that there is no State in the Union where the labors of the farmer are better paid than in Vermont. Though emphatically a mountain State, her valleys are traversed by railroads, by which a ready market is provided, with but little cartage, in almost, if not quite, every county of the State. In horses and sheep, she does a large business with the Southern and Western States, while her grain crops, her dairy products for which she is celebrated, and her fine beef, pork and mutton, are unsurpassed in the Boston market. In the Co. Gent. of Jan. 13, we gave a statement of the shipment of butter and cheese during the year 1858, from which it appeared that over $600,000 worth were sent to market from a single depot in Franklin county. In the *Middlebury Register* of Jan. 26, we find the proceedings of the annual meeting of the Addison Co. Ag. Society, from which it appears that premiums were awarded for the following crops:

Winter Wheat—34½ and 31¼ bu. per acre.
Spring Wheat—35½ bu. per acre.
Indian Corn—123¾ and 121¼ bu. per acre.
Oats—71 and 65½ bu. per acre.
Peas—35 bu per acre.
White Beans—41¾ bu. per acre.
Potatoes—225 and 182½ bu. per *half acre*.
Sugar Beets—340 and 250 bu per half acre.

A YOUNG FOREST.—Our excellent friend, Major M. R. PATRICK, of Sacketts' Harbor, remarked a year or two since in allusion to the different departments of the government at Washington, that the time would come when there would have to be a Department on Woods and Forests. Sympathizing somewhat with this feeling, we always record with much pleasure any successful experiments in their increase and management, and have been particularly pleased with the premium awarded recently by the Illinois Agricultural Society for a grove of timber trees planted by L. H. Thomas, six miles east of Virden. The seeds of the trees were planted on new ground in 1852—3, and 4—and "many of the walnuts, oaks, and maples, are now twenty-five feet high, very thrifty, and growing."

HIGH FARMING AT THE WEST.—The Illinois State Agricultural Society, at the late meeting of its officers, awarded a first premium for a *forty acre farm*, occupied by two brothers, A. & O. Barnard of Bloomington, who, as the report states, "by pursuing a system of *deep plowing*, *high manuring*, and *clean culture*, for a number of years, *have distanced all competition*." We should like to have had the details of their management and profits, but the above is all we are favored with.

SUGAR CANE MILLS.—W. T. Dennis of Richmond, Ind., has obtained a patent for an improvement in the rollers of sugar cane mills. The rollers are plated with composition metal, to prevent the action of the acid upon the iron roller, which corrodes the iron, thereby discoloring the juice—making the sugar and syrup black, and injuring its flavor.

GOOD SHEEP.—Messrs. CHARLES & VAN METRE of the Center Market in this city, have recently bought 100 sheep of Mr. H. N. WRIGHT of Genesee county—50 of them were fed by S. Wilbur of Genesee Co., the average live weight of which was 135 lbs.—dressed, 80 lbs. The other 50 were fed by Wm. Ware of Batavia—average live weight, 109 lbs.—not yet killed. The price paid was 6 cts. per lb. live weight, making the first lot average $8.15, and the second, $6.54.

SHORT-HORNS AND DEVONS FOR CALIFORNIA.—Dr. JAS. C. COBB of San Jose, Santa Clara Co., Cal., having visited a number of different herds with a view to the selection of stock for shipment, finally concluded, last week, an advantageous purchase of Short-Horns from WM. HURST of this city, and of Devons from Capt. Jos. HILTON, New-Scotland. The former included "Duke of Elizabeth," 14 months old, and "Nymph's Marmion," 7 months, young bulls originally from the herd of B. & C. S. HAINES of New-Jersey, and two heifers, "Anne" and "Dutchess of Albany," the latter especially one of great promise, and both in calf by "Neptune." The four will be an important acquisition to the Durham blood of the Pacific coast, and will do much to render it as popular there, as it has long been at the east. We have not received particulars as we expected, in relation to the Devons obtained, but understand that they comprised several choice animals. The whole were to go in the steamer of Saturday. Accompanied by Col. JOHNSON, and Hon. JOHN WENTWORTH of Chicago, who has been spending some time in this vicinity, we paid a visit on Wednesday to the stock under Mr. HURST's care. "Neptune," we are glad to say, has improved very much in appearance and condition since the State Fair, when he was not well, and is now in nearly as excellent order as ever before. Our readers already know that neither he nor his get, have often found their superiors. "Fenella," the red cow purchased at Mr. ALEXANDER's last sale, by Mr. THORNE, and subsequently bought by her present owners, when passing through this city on the way to Thornedale, has a most likely heifer calf, now about six weeks old, sired in Kentucky by "Sirius," and, as far as one can judge at its present age, there is no fear that it will discredit its breeder or its parents. Mr. HURST deserves great credit for the good order preserved at his establishment, as well as for his skill in its direction, and we should be pleased to refer to both at greater length if our space permitted. Both Mr. H. and Capt. HILTON justly take some pride in the prospect that through the medium of the present transaction, Albany will come to be considered still more widely than heretofore, a center for the production and purchase of first-class animals.

SUGAR-MAKING FROM THE SORGHUM.—A Michigan subscriber says—"We want some good articles on sugar-making from Sorghum, defining the process minutely from beginning to end. The experience of last year should produce something new, and as it is attracting more of the attention of agriculturists than anything else, and will become a matter of national importance, all who experimented with it should furnish the public with the results."

"SHEEP AND WOOL."—Writing on this subject, the *Genesee Farmer* says, "One reason why farmers are averse to wool-growing, is the difficulty of making satisfactory sales, as buyers are always ready to decry the article when it first comes into market, and quite as willing to hold it for a rise after they have succeeded in getting it into their hands." This expresses the feeling of many farmers in regard to this business. The only remedy suggested, is to hint that "farmers who have good stocks of wool, can quite as well afford to hold it as those who often borrow money to purchase for that object."

ALDERNEY BEEF.—Mr. JOHN T. NORTON of Farmington, Ct., recently sold a pair of full-blood Alderney steers, three years old and not fat, simply in fair flesh, good store order. They were slaughtered, and, to the surprise of the butcher, made most superior beef, fully and elegantly marbled throughout. Mr. Norton obtained a cut for his own table, and assures the Homestead that it was "equal to any, if not the best beef he ever tasted. Better testimony cannot be had."

Our Next State Fair.—We give elsewhere a concise report of the proceedings at the Annual Meeting of our State Ag. Society, held in this city last week. It will be seen that in accordance with what we think was the generally prevailing sentiment, the meeting recommended **Albany** as the place of holding the next State Fair. The customary session of the new Executive Board was held on Friday morning, at which this recommendation was adopted, conditional only upon the compliance of the city with the usual requirements of the Board, and October 4—7 was appointed as the time. On the question of time there was quite a discussion, there being a strong feeling outside of the Executive Board, which we cannot ignore, in favor of an earlier day. We trust, however, that the weather may prove propitious, and that we shall not have occasion to regret the above decision from the cold rains or threatening skies then too likely to prevail, and the consequently diminished attendance. It is thought that under ordinarily favorable circumstances, there will be a sufficient interest taken in the next exhibition, not only in our own section of the State, but in westerly portions of New-England, to render the coming anniversary a marked era in the Society's history. During the years that have elapsed since the last Fair here, great changes for the better have taken place in this city and county, as well as through the whole territory around us—changes, which include not only improvement in various ways on the part of those directly interested in Agricultural and Horticultural matters, but also an increased attention to rural pursuits and pleasures by those engaged as a regular business in other occupations.

☞ We are indebted to Dr. R. T. Underhill of the Croton Point Vineyards, for samples of three kinds of Wine, which he has been manufacturing for some years past and which he now proposes to bring into market. One is made from the Catawba alone, another from the Isabella, and a third from a mixture of the juice of the two grapes. Dr. U. may be addressed either at Croton Point, or at Number 293 Broadway, New-York.

Vermont State Fair—At a meeting of the Directors of the Vermont State Agricultural Society, held at Burlington on the 3d inst., it was voted to hold their next annual fair at Burlington, on the 13th, 14th 15th and 16th of September.

☞ The next Ohio State Fair is to be held at Zanesville, Sept. 20—23.

Grape Culture.—It will be seen by a notice in this paper, that D. M. Dewey, bookseller, Rochester, announces a new work on this subject. Such a work is needed, and if properly treated, will be a valuable addition to our rural books.

The Revolving Horse Rake.—Your correspondent John Jones is correct, in regard to Moses Pennock being the inventor of the "revolving" horse-rake—the *single* rake, however, had been in use several years previously. The records of the Patent Office will show that Moses Pennock took out the *first* patent ever issued on such rakes, and that on said patent he also took out the *first re-issue* patent ever granted under the U. S. Patent Laws. This is a memorable fact respecting the revolving rake. I cannot name with certainty the year in which this rake made its appearance—but it was *about* thirty-five years ago—as I remember well—when a boy at home on my father's farm—seeing friend Pennock bringing his rake to us for trial, and the gathering of the neighbors to witness its performance.

You may therefore safely place the name of Moses Pennock "in large letters" for the gratification of your correspondent "G. L." D. *Chester Co., Penn.*

Large Radish.—While writing, I will tell you what a large radish I took up out of my garden last October. It was two feet ten inches long—five inches above the bottom point, was twenty-one inches round, and five inches below the top, fifteen inches round. When topped and dirt cleaned off, it weighed twelve pounds. A. G. *Sabula, Iowa.*

Hint to Our Western Friends.—We very much need a large circulation of some well established and reliable work on agriculture, stock growing, &c., like the Country Gentleman, in Iowa. "By-the-way," Messrs. Editors, permit me to say that if you would solicit and urge through your columns, upon our western farmers, the great importance of communicating their views and experience through the same medium, I verily believe it would be much to your advantage, as well as enlighten some of your readers. D. A. *Farmington, Iowa.*

Fine Oxen.—One of my neighbors, Mr. L. Murdock, has a pair of grade Durham cattle, six years old past, matched when they were about 12 hours old, that now weigh about fifty-eight hundred pounds. He intends to feed them next year. If these cattle continue to do well, old Cayuga will be apt to take the front rank next year. H. A. *Venice Center.*

What of the Mice!—Two or three years since, complaints came up from all parts of the country, in consequence of the ravages of the meadow-mole. Fruit trees were ruined by thousands, and almost every thing having vegetable life was attacked by these vermin. This fall and winter they appear to be missing, at least in this neighborhood. Where have they gone to? We can say "good riddance" to them; but as we then bemoaned our losses, let us now give thanks that we are spared the like of them. E. Merritt. *Pawling.*

Kershaw Squash.—I enclose a few seeds of the Kershaw, raised by me last fall. Seed were sent to a friend two years ago, from Alabama. They keep about as well, or better perhaps, than the Marrow, and taste more like a *sweet* potato than squash, though the form resembles the Crook-neck, but it grows larger. I am very fond of eating slices of them, fried in pork fat. The Southerners eat them so, and also baked. Henry B. Osgood. *Whitinsville, Mass.*

Cholera in Hogs, &c.—The cholera is slaying its thousands, and the probability is that stock hogs will be high in the spring. Horses, mules, cattle, and sheep, are high now. F. R. *Bullitt Co., Ky.*

Black Barley.—I inclose a sample of Black Barley. This is a fall or winter variety, recently introduced from England—so says the gentleman who has just sent it to me from Hamilton Co., O. He says it is very prolific—having counted 56 heads from one grain; says it will not malt, but is raised for stock—being superior to oats. This barley may not be new to you. I shall give it a trial. L. Norris. *Windsor, O.*

Net Weight of Swine.—In one of the recent numbers of your paper, I notice a carefully prepared statement of the gross and net weight of hogs, showing in the cases quoted, that a deduction of one-fifth was quite too much. Being a western man, I would like to ask if our eastern friends are in the habit of sending such hogs to market as a rule? If so, then we must give up, for while I have seen many such hogs, yet it is not true as a rule. A drove of 300 or 400 hogs, making an average of 250 or 300 lbs., would be extra fine. I have been so situated for some months past, that I have made up the loss in netting hogs for several thousand head, and find that hogs of 200 to 300, well fatted, will lose the one-fifth, while if under that weight, and only marketable, the loss has been one-fourth. Extra hogs, such as stated by your correspondent, would not vary from his statement. Subscriber. *Alton, Ill.*

Cure for Scratches on Horses' Feet.—First wash them clean with soap and water—then apply white lead and linseed oil, rubbing it thoroughly in with a brush. One application will commonly effect a cure, but in bad cases two may be necessary. Wilson Dennis. *Applebachville, Pa.*

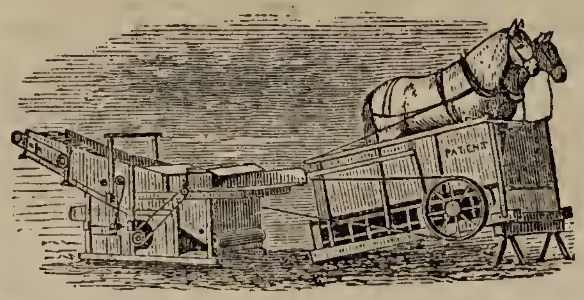
☞ The "Memoranda" of *fifteen hundred and fifty-one* interrogatories in agricultural statistics, issued by the U. S. Patent Office, have been sent us by Chas. Morrell, member for New-York of the late "Advisory Board."

FIRST PREMIUM HORSE POWERS, THRESHING MACHINES, &c.,

Made by G. WESTINGHOUSE & CO.,

SCHENECTADY, N. Y.

First Premiums at the State Fairs of New-York and Michigan in 1856, New-York and New-Jersey in 1857, and New-York in 1858.



Endless Chain Powers—One, Two, and Three Horse.

These are made to run still and easy, by having the chains peculiarly constructed; and all danger to the team by having the gearing fly off, when in motion, put away, by having it so fastened that it cannot work loose and come off when in motion.

The Three-Horse Powers are equal to a Six-Horse Lever Power, for driving a Threshing Machine. Threshers of suitable sizes are made to go with these Powers.

Lever Iron Powers, for from 4 to 8 horses.

From our experience in the manufacture of this class of machines, and the examination made of the various kinds now in use, we think we are justified in the opinion that we have a Power which is superior to most, if not all others now in use. We have its gearing placed in a strong cast-iron frame, all one piece—therefore will not rot, nor become weak by exposure to the weather, as with wood frames, which let the machinery get out of place, causing it to break or wear out, besides making the Power run heavy. Powers often lose 10 to 50 per cent. of their power, by becoming strained from their proper shape. The Jack is connected with the Power by a line shaft with universal joints. The horses have only to step over this shaft. The motion can be very readily changed from that necessary for threshing, to that for a Cotton Gin. The band-wheel is horizontal, which makes it convenient in threshing, as the Power may be left unmoved, while the Thrasher can be changed to different positions. No arms or center are used or necessary for the main driving-wheel. The power is conveniently arranged for moving, and easily set for working, and we believe it will be found as efficient with six horses, as most others are with eight.

Overshot Threshers with Vibrating Separators, combined with a Winnower.

These Threshers have an arrangement patented by us, which effectually prevents the grain and dust from flying into the feeder's face—which removes the principal objection to Overshot Threshers. The cylinders are made strong and heavy, have their teeth or spikes securely fastened in by a screw and nut inside, and are perfectly balanced before leaving the shop, by being made to run perfectly still at a high speed, on a light frame.

The Vibrating Separator merely separates the grain and chaff from the straw, but is done in a perfect manner by aid of a straw-shaker placed in the Separator. We have obtained first premiums at a number of the New-York State Fairs, on our Thresher and Vibrating Separator, and are considered by all who used have them to be the best in use.

The Winnower combined with the Thresher, threshes and cleans the grain, delivering the clean grain at the side of the machine by a spout. A revolving wire separator connected with it, makes it the best machine for separating the grain from the straw, that there is now used. It threshes clean, cleans the grain well, and when doing a fair amount of work, will not waste grain by carrying it off with the straw.

We make two sizes of this machine. One size for a Two Horse Endless Chain or a Four-Horse Lever Power; the other for a Three-Horse Endless Chain or Six to Eight Horse Lever Power. We also make Undershot Threshers with Winnowers, which have been driven usually by Lever Powers.

We have purchased the right of making Pusey's Patent Governor for Endless Chain Horse Powers, in connection with ours. This will be found to be an excellent addition to the Power, as it effectually regulates its motion, and is a preventive of accidents liable to occur by the breaking or flying off of belts.

Besides the above, we make machines for Hulling Clover, with or without a Cleaner attached; Wood Saws, Drag and Circular. Also a Butter-Worker, invented by George Price, a Shaker, which is by the Shakers said to be an excellent machine for that purpose.

PRICES.

Two-Horse Power Thresher and Separator (26-inch Cylinder,)	$160
Two-Horse Power, Thresher and Separator, (30-inch Cylinder,)	165
One-Horse Power, Thresher and Separator,	135
Three-Horse Power,	140
Two-Horse Power,	115
One-Horse Power,	90
Lever Power without Sweeps,	110
Lever Power with Sweeps.	115
Two-Horse Power Thresher and Winnower (55 feet of Belt,)	245
Thresher and Winnower (for Two Horse Power,)	125
Large Thresher & Winnower, with Tailing Elevator, for 3-horse Endless Chain or Lever Power,	145
Thresher and Separator (26-inch Cylinder,)	45
Thresher and Separator (30-inch Cylinder,)	50
Clover Machine with Cleaner,	80
Clover Machine without Cleaner,	40
Circular Wood Saw (24 inch Saw, Railway Table,)	40
Circular Wood-Saw (24-inch Saw, Slide Table,)	37
Drag-Saw, for cutting logs,	32
Dog Power, for churning,	15
Pusey's Patent Governor,	8
Pusey's Patent Governor in connection with Power,	5
Shaker Butter Worker,	$10 and 12

Main Belting (Rubber) for lever power, 16 to 20 cts. ℔ foot.

All the above machines we manufacture in a substantial and workmanlike manner, and warrant them to suit those purchasing after a fair trial, and after we or our agents shall have had opportunity to correct anything that may cause dissatisfaction, or they may be returned to us, and the pay given will be refunded. Further information will be given upon application to the subscribers.

All communications will be promptly attended to, and orders receive immediate attention.

Feb. 24—w&m1t G. WESTINGHOUSE & CO.

THE LODI MANUFACTURING CO.

Poudrette! Poudrette!!

Is offered for sale by the subscribers, wholesale and retail, in lots to suit purchasers. This article has been now in use for over 17 years, and is the most popular manure for corn and early vegetables, in market.

It is quick and powerful, and can be put in direct contact with the seed without injury. Price $1 50 per barrel, delivered on board of vessel, for any quantity over 6 barrels. $2 06 for a single barrel.

CERTIFICATES.

The undergigned have used the Poudrette of the Lodi Manufacturing Co., for the number of years, and upon the crops set opposite to their names, and can recommend it as a cheap, and most excellent fertilizer.

Charles Smith, Bloomfield,	N. J.,	10 years,	corn.
Cyrus Canfield, Caldwell,	"	10 "	"
John Squires, Livingston,	"	10 do. and	garden truck.
A. J. Jacobus, "	"	17 do.	" "
H. W. Harrison, Caldwell,	"	10 do.	" "
J. Simpson, Franklin,	"	8 do.	" "
Hiram Farnham, Livingston,	"	15 do.	" "
J. A. Harrison, Orange,	"	10 do.	" "
B. F. Lum, Chatham,	"	15 do.	" "

A pamphlet containing certificates of practical farmers in all parts of the United States, with every information and direction for use, will be mailed to any one sending the address. GRIFFING BROTHER & CO.,

General Agents for the Company,
NORTH RIVER AG. WAREHOUSE, 60 Cortlandt-st, N.York.

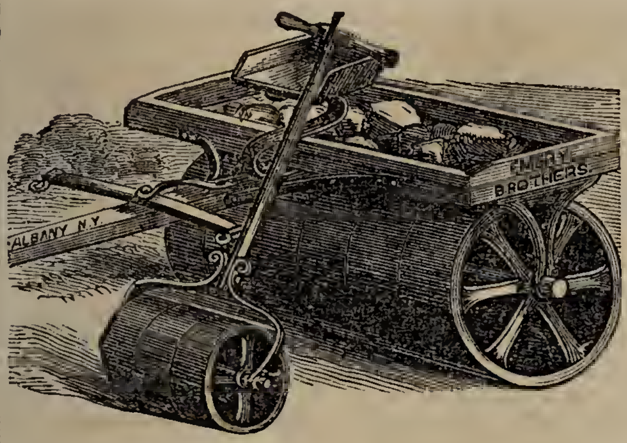
TO PLANTERS AND FARMERS.

CORIA.

This fertilizer is composed of dead animals, leather scraps, old boots and shoes, (gathered in cities,) dissolved by a new and ingenious process, into a liquid of the consistency of molasses; to this is added night-soil, blood, and ground bones. The whole is then dried and ground.

It is offered for sale on the strength of the well-known fertilizing qualities entering into its composition. Circulars, with directions for use and analysis, will be forwarded on application to the subscribers—agents for the Lodi Manufacturing Co. GRIFFING BROTHER & CO.,

North River Agricultural Warehouse,
March 1—m3t No. 60 Cortlandt-st., New-York.



IRON FIELD ROLLERS.—The annexed engraving represents the latest improvements in the Field and Garden Rollers, as manufactured at the

ALBANY AGRICULTURAL WORKS,

BY

EMERY BROTHERS,

PROPRIETORS,

Nos. 62 & 64 State Street,

ALBANY, N. Y.

The Field Rollers are made of 12-inch iron sections of 30, 24, and 20 inches diameter, and four to seven sections all hung upon a heavy iron shaft, of the required length for the Roller.

Hangers from each end of the shaft, suspend a strong plank box or tray over the Roller, for carrying extra weight; to this box, a tongue is bolted for drawing the same.

By this construction, each section revolves independent from the others, which greatly facilitates turning it about, and avoids shoving up the ground in the operation.

The Roller serves to level and smooth plowed land, and when seeded to grass, prepares it for the Scythe, Mowing Machine and Horse-Rake, as it forces sods and small stones into the ground, pulverizes the lumps of earth, and compresses the soil at the surface around the seeds sown, and causes a quicker and more sure germination and growth. This compression deprives of shelter many kinds of injurious insects, which otherwise would find habitations among the lumps, stones, and loose earth—often to the detriment of the growing crops. When used on land after the frost is out in spring, it presses back the earth and roots of plants which have been raised by the action of freezing, and preserves the crop, which, if left exposed, would have been destroyed.

This compressed surface, although but nominal in thickness, is a sure preventive of the beating down by heavy rains, as it will withstand the force of the hardest storm of rain or hail, and cause the water to filter gently through, without drowning and solidifying the earth beneath.

In light and porous soils, the Roller is indispensable for the retention of sufficient moisture to protect vegetation, and often saves the whole crop from the effects of a burning sun without it.

Price, 30-inch, 6 sections, $50—$5 off for each section less than 6.

Price 24-inch, 6 sections, $45—$4.50 off for each section less than 6.

Price 20-inch, 5 sections, $35—$4 off for each section less than 5.

GARDEN ROLLERS (for Hand Use.)

These are constructed of iron sections, in a similar manner to the Field Rollers, but without box for extra weight. One sided weights are attached to the shaft inside of each section, and the handle is forked and fastened by square fittings to each side of the shaft, and is thus counterbalanced and inclines upward, and relieves the operators.

Prices, 15 inches diameter, 2 sections 7½ in. long, $6.50—each additional section extra, $1.50.

Price, 20 in. diameter, 1 section 12 in. long, $9—each additional section extra, $4.

Price, 20 inches diameter, 1 section, 20 in. long, $14.
Price, 24 inches diameter, 2 sections, 12 in. long, $18.
Price, 28 inches diameter, 2 sections 12 in. long, $20.

Full Descriptive and Illustrated Catalogue of the Albany Ag. Works, furnished on receipt of 6 cents to prepay postage on same. Feb. 17—w&m1t

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HUNGARIAN GRASS.—The Subscriber is now prepared to furnish the public with GENUINE SEED, in small lots—price per bushel, $3.00. A sufficient quantity to seed one acre will be forwarded to any address upon the receipt of $1.00.

WILLIAM THORBURN, Seedsman,
Feb. 17—w3m1t 492 Broadway, Albany, N. Y.

EARLY SEEDS.—As the season of Hot-bed making is near at hand, the subscriber calls attention to his complete assortment of EARLY SEEDS, consisting of all the most desirable varieties of Cabbage, Lettuce, Radish, Cauliflower, Tomatoes, Cucumbers, Egg Plants, Carrots, Celery, Peppers, &c., required for early use. The seeds are all fresh, and of first quality. WILLIAM THORBURN, Seedsman,
Feb. 3—w3tm1t 492 Broadway, Albany, N. Y.

FIELD AND GARDEN SEEDS from reliable growers.

Agricultural and Horticultural Implements of the most approved patterns.

GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., New-York City.

THORBURN'S DESCRIPTIVE RETAIL CATALOGUE of Garden, Field and Flower Seeds for 1859, now ready, will be mailed to applicants, by enclosing a one cent stamp Address

WILLIAM THORBURN,
Feb. 10—w3tm1t. 492 Broadway. Albany, N. Y.

NO. 1 PERUVIAN GUANO,

"Hoyt's" Superphosphate of Lime,

Bone Dust, Plaster,

Poudrette, Tafeu, &c.

The above Fertilizers *warranted* pure, and sold at the lowest market price.

GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., N. Y. City.

SPECIAL NOTICE.—FARMERS SEND your orders for

Shares' Patent Coulter Harrow and Grain Coverer,
Shares' Patent Potato Covering Machine,
Shares' Hoeing and Hilling, and Cultivating Machine.

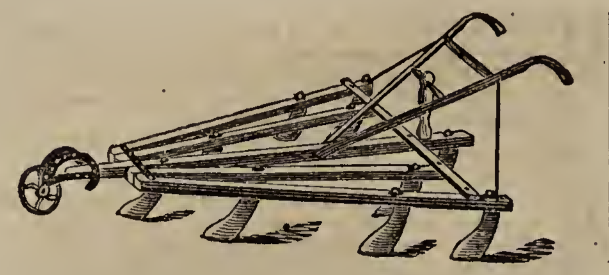
These Implements, which attracted very great attention at the winter meeting of the N. Y. State Ag. Society, held at their rooms in this city, on the 10th inst., will work on any kind of land, even if stony and stumpy. Every farmer present expressed himself highly pleased with the principle and appearance of the machines, and we received a number of orders for them, from men *who had never seen them before. They were satisfied the principle on which they were constructed was right.* In the Co. Gent. of Feb. 10, we saw a communication signed by G. W. DURANT, giving his opinion of the Cultivating and Hilling Machine, which was the only one he used or ever saw. We will guarantee that each of these machines will perform as well, if not better than Mr. Durant says, and if farmers wish either of these implements, they must apply soon, as the demand for them is constantly increasing, and we are fearful that we will find it difficult to supply them in the spring. They will cause a great revolution in the working of the farm, making it *cheap and easy*, and more perfect than it was ever done before. *First come first served.* For particulars and Catalogue, address

PEASE & EGGLESTON, (only Manufact'rs,)
Feb. 17—w2tm1t Albany, N. Y.

TO DEVON BREEDERS.—To avoid breeding in-and-in, the subscriber offers to sell or exchange (for a strictly first-class animal,) his thorough-bred North Devon Bull "Metropolitan," now three years old, bred by R. H Van Rensselaer of Morris, Otsego Co., N. Y., directly from imported stock. Sire, Megunticook (251)—G. Sire, Prince Albert (102)—Dam, Ladybird (820,) by Venture—Grand Dam Lady, by Hundred Guinea (56.) JOHN BANKS,
Feb. 3—w4tm1t Bainbridge, Chenango Co., N. Y.

HAY PRESSES.—DEDERICK'S *Celebrated Patent Portable Hay Presses*, are acknowledged to be the only ones that will satisfy the demands of the Farmer. One ton of hay per hour can be pressed with one of these machines, worked by two men and a boy, in convenient sized bales, weighing from 270 to 325 pounds. Price from $130 to $165, delivered on cars or boat, in Albany, N Y. For further particulars, address

PEASE & EGGLESTON,
Feb. 10—w4tm1t Albany, N. Y.



SAYRE'S PATENT

(NOT SHARE'S PATENT,)

HORSE HOE,

AND ADJUSTABLE

DOUBLE MOULD-BOARD PLOW COMBINED,

MANUFACTURED AND FOR SALE BY

EMERY BROTHERS,
Nos. 62 & 64 State Street,
ALBANY, N. Y.

Also for sale by the Inventors and Patentees,
SAYRE & REMINGTON,
UTICA, N. Y.

This implement, although but recently patented and introduced, has had an extensive sale the past season.

It is equally well adapted for weeding, hoeing, and hilling corn, cotton, tobacco, broom corn, potatoes, and in fact, all crops planted in hills or rows, and without the use of a plow or hand-hoe.

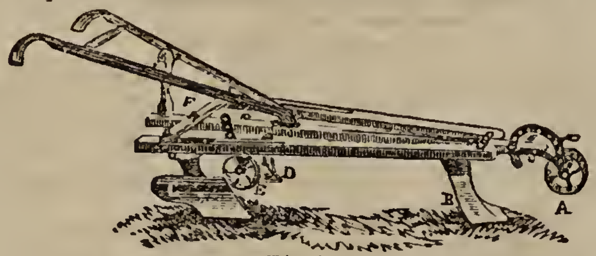


Fig. 1.

Fig. 1 shows the implement as arranged for hilling and hoeing. For common use, the wheel E is set as low as the edges of the blades or mold-boards C and D, which causes the implement to run level, the wheel traveling in the furrow made by the front tooth B. For wet soil, the wheel E should be lowered about two inches, preventing the blades C and D, running as low as the front tooth B.

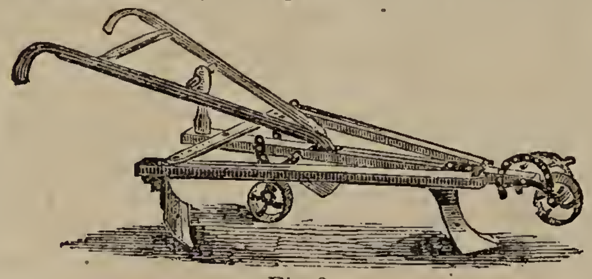


Fig. 2.

Fig. 2 shows the implement arranged for turning the earth from the crop—the change from fig. 1 being the transposition of the blades C and D, each for the other, thereby cutting up the weeds and covering them between the rows.

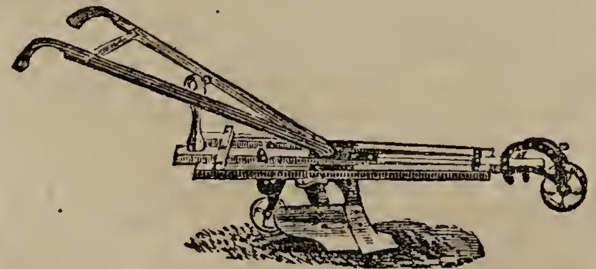


Fig 3.

Fig. 3 shows the same implement as arranged for a Double Mold-Board Plow. This is done by closing the sides of the frame, using a shorter cross-bar instead of the long one, as in fig. 1, and moving the forward tooth back, and the two back teeth, C and D, forward, so as to connect with the back edges of the forward tooth, which makes a complete Double Mold-Board Plow, with the wheels as shown in fig. 3, and is used for furrowing, ditching, ridging, hilling, and digging potatoes, as well as various other purposes.

The points and mold-boards are of the best steel, and highly polished. They are free from clogging in any soil, and very durable. By running on adjusting wheels at both ends, they are easily drawn, and can be set to any depth; and in being adjusted to various widths, they *do not change the working angle of the mold-boards C and D*, as is the case with all other expanding cultivators and horse-hoes.

Persons ordering them will please state what kind of soil and crops they desire to use them for, as among the great variety of forms and sizes of the steel mold boards, and temper of the steel, the best for each of the purposes for which they are to be used, can be selected.

They have been awarded Premiums as the best machines exhibited at the following Fairs:

United States Fair at Louisville, Ky.
" " " Richmond, Va.
New-York State Fair at Buffalo.
" " " Syracuse.
American Institute, at Crystal Palace, New-York.
Syracuse Mechanic's Fair, Syracuse.
Albany County Fair, Albany.
Oneida County Fair, Utica.
Herkimer County Fair, Little Falls.
Rensselaer County Fair, Lansingburgh.
Tompkins County Fair, Ithaca.
Saratoga County Fair, Mechanicsville.
Delaware County Fair, Delaware, O.
Maryland State Fair, Baltimore.
Virginia State Fair, Petersburg.
Seaboard Ag. Fair, Norfolk, Va.

The above includes every Fair where they have been exhibited.

They also manufacture and have constantly on hand, a great variety of kinds and sizes of Cultivator Teeth; also Cultivators complete for one and two horses, constantly on hand and for sale at the lowest remunerating prices. The two-horse Cultivator, as shown at the head of this article, is considered one of the best construction in use, as it is easily managed, and readily set to any width, and the teeth so arranged as to maintain parallel distances in working in the earth at all widths.

For prices, address by mail as above.

Illustrated Catalogues furnished gratis, on receipt of six cents to prepay postage on same.

AGRICULTURAL IMPLEMENTS
AT MANUFACTURER'S PRICES,

Consisting of Endless Chain Horse Powers and Threshers, Excelsior Fan Mills, Corn Shellers, Harrows, Straw and Hay Cutters, Cider Mills and Presses, Churns, Cultivators, Iron and Wood Beam Plows, &c., &c. Send for a Circular giving prices. For sale by A. LONGETT,
Mar 1—m3t | mar 24—w6t No. 34 Cliff-st., New-York

SUPERPHOSPHATE OF LIME.
BONE DUST Warranted pure.
For sale by A LONGETT,
Mar 1—m3t | mar 24—w10t 34 Cliff st, New-York.

In Press, soon to be Published,

OPEN AIR GRAPE CULTURE,
Designed for the use of amateurs in the Northern States, with practical directions for the

Cultivation of Vineyards,

Comprising the observations and directions of the most eminent Grape Growers in the United States, and the latest and most approved methods of Manufacturing Wine, illustrated with numerous Engravings. By JOHN PHIN. Rochester, N. Y.: D. M. DEWEY. 1859.

Price in muslin binding,........................ $ 75
" " with 4 colored plates,.. 1.50

The work will be forwarded by mail to any address, postage paid, on the receipt of the price, soon as issued—or on or before April 1. Address as above. Feb. 17w&m1t

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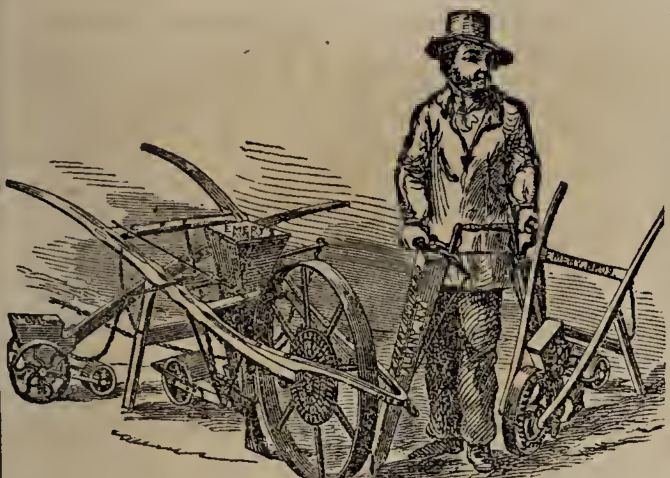
CLOVER AND TIMOTHY SEED.—The subscribers will, in connection with Agricultural, Horticultural, and their Garden Seed business, receive consignments (pay charges) of Clover and Timothy seed from growers and others. Dealing directly with the consumers of these articles, we can of course obtain the highest prices, and we respectfully solicit consignments of the above mentioned seeds. References as to responsibility given if required. PEASE & EGGLESTON,
Jan. 13—w8tm2t 84 State-st., Albany, N. Y.



SEED PLANTERS.—As the time for selecting and purchasing Planting Machines is at hand, the careful attention of farmers is called to the assortment manufactured and for sale at the

ALBANY AG'L WORKS,
Nos. 62 & 64 State Street,
ALBANY, N. Y.,
EMERY BROTHERS, Propriet'rs.

Among them may be found the two-handled

Albany Corn and Seed Planter,

Also known as Emery's Corn Planter—for hand or horse power, and adapted for all kinds of seeds, large or small, heavy or light, and any amount to the hill, drill, or acre. It is also equally well adapted for hills or drills. This is shewn in the foreground in the engraved group of Planters annexed. Another is the two-handled

Garden Drill and Planter,

For all kinds of seeds, large and small, for garden use. This is shown on the right hand of the group in the engraving. A third is the one-handled

Seed Drill,

Intended only for small seeds and for drill planting. This is seen on the left of the group. The last of the group is seen in the hands of the Farmer, in the act of using it, and is called the

Double Hill Hand Corn Planter,

For planting two rows at a time by hand, in hills, as the operator walks through the field, as with two walking canes, one in each hand, and planting each time he sets them in the earth.

This assortment comprises all the Farmer and Gardener can desire, and each machine is of the most approved kind in use. The Albany Corn Planter has been in use nearly twelve years, and has been the most successful of all machines for the purpose intended—working equally well with all kinds of seeds and soils. It has gained a world-wide reputation, and enjoys a constantly increasing demand; and, notwithstanding the scores of more recent inventions, and many times the effort made to introduce them, this Albany Planter still maintains its supremacy.

It has the circular brush and slide distributing arrangement for small seeds, like the smaller Hand Garden Drills. It also has a wooden cylinder fitted inside the seed hopper, which is substituted for the circular brush, when corn and like seeds are to be planted. This cylinder has a series of cells or cups in its surface, which are adjustable to any amount or size of the seeds, or can be arranged so that only a portion of the cups shall receive seeds, while the others take none at all.

This cylinder receives a motion by means of its shaft and gear wheels, and connection with the large forward ground wheel. The disc of this large wheel having several rows of cogs, it can be made to give any variety of motion required to the cylinder, for planting various seeds, in different quantities and distances apart. With all the cells open, and the highest motion of the gears, it will drop once for every three or four inches, or equivalent to drill planting; while by shutting off a portion of the cells, and a slower motion, any desired distance may be obtained, to eight feet between the hills. It has a plow adjustable to any depth, and a coverer which scrapes the requisite amount of earth over the seed, and a compressing roller following, finishes the work at one operation. By lashing a wooden rod crosswise the frame, nearly over the plow, and attaching one end of a trace chain to it, at each side of the planter, and the width apart desired for the rows, the machine will mark off its rows as it works through the field, as while one chain drags in the mark last made, the other makes a new mark as it drags over the earth, thus planting exactly between the marks and always parallel. From six to ten acres per day can be planted with one man and a horse, with rows three and a-half feet apart. When used without a horse, not so much can be done.

Several other parties, here and elsewhere, have made patterns from this planter, and made and sold planters, representing them to be the same, none of which are so made as to do the work as well or uniformly, and few, if any of them, have been made so as to avoid breaking and grinding the seed, or retaining more or less in the cells, and dropping irregularly. Price $14.

The two-handled Garden Drill is calculated for small and light seeds, has the circular brush and sliding metalic plates, same as the simple drill, and as used in the Planter last described. It also has a wooden cylinder, with adjustable cells, for sowing large and heavy seeds like peas, beans, &c. This cylinder can be instantly substituted for the brush, and vice versa. This is only adapted for drills, although capable of operating with all kinds and quantities of seed. It covers the seed and rolls the ground at the same time. Price $6.

The one-handled Seed Drill is a light, simple machine, and adapted to drilling small and light seeds only. The axle passes through the lower portion of the hopper, and turns with the wheel. There is a circular brush fixed upon this axle inside the hopper, and revolves with it. There is a series of metalic slides to fit, and form the bottom of the hopper, each slide having holes of different diameters, through which the seed is forced by the action of the brush inside—the quantity of the seed depending upon the size of the hole in the slide, which is in the hopper. The drill makes its furrow, deposits with unerring accuracy the requisite amount of seed into it, and the roller follows and finishes the operation. Price $3.

The Double Hill Hand Planter is a modern invention, and consists of two complete planters, which may be used singly or connected together by their upper ends, and as shown in the hands of the farmer in the engraving. Each of them consists of a light wood box about as long as a walking cane, and will contain about three quarts of corn; and is provided with a D handle, by which they are carried and operated—the lower end is flat and sharp, and pointed with two flat spring steel plates, and enters the ground like a chisel. Inside the box is a slide-valve and a piston, both of which are moved by a side motion of the D handle, to which they are connected. It is operated by setting the point where the hill is to be, and pressing directly on the D handle, when the points enter to a proper depth, and with a slight sideways motion of the same handle, the seed is measured off, and forced into the ground by the piston to the bottom; thereby depositing the seed at an even depth, and as the point is withdrawn the earth closes over the seed. A man can operate two at once, as well as one, by setting the points at proper distance for width of rows, as he can plant as often as he will swing a scythe in mowing grass. Price, single, $3.50; double, $6.00. Feb. 10—w&m1t.

VALUABLE MICHIGAN FARMS FOR SALE.—The late Dr. B Ticknor's farm—320 acres—3 miles south-east of Ann-Arbor—the *model farm* in Washtenaw county, with buildings, orchard, soil, timber, water, fences and every thing to suit a farmer of taste and means—is for sale to settle the estate.

The "Bishops farm", 1300 acres, 15 miles north, and the "Place farm," 480 acres, 9 miles north-west of Ann Arbor—both good soil, well watered, well situated, and adapted to grain or grazing—will be divided to suit purchasers, and sold *very low*.

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E. W. MORGAN,
Ann Arbor, Mich.
Jan. 6—w1tm2t*

THOROUGHBRED NORTH DEVONS FOR SALE.—Beanty 6th (527 Davy's Devon Herd Book)—9 years old.

Venns (1104 Davy's Devon Herd Book)—9 years old.

Annette (in forthcoming volume)—2½ years old. Sire imported Exeter (198)—dam imported Virginia (1116.)

Victorine (in forthcoming vol. of Herd Book)—yearling. Dam Venus (1104)—Sire Hiawatha—Grandsire Imported Comet. All herd-book pedigrees. Three first are served by my imported bull "Duke of Devonshire," bred by Jno. Quartly, Esq. Price for four head $550.

ALFRED M. TREDWELL,
No. 251 Pearl-st., New York City.
Jan. 6—wt2m2t

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FORBES.
VAN VRANKEN. N.Y.

THE CULTIVATOR.

THIRD To Improve the Soil and the Mind. SERIES

VOL. VII. ALBANY, APRIL, 1859. No. IV.

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The Farmer's Discouragements.

Say what we may of the pleasure and desirableness of the profession of the farmer, it will often be found full of difficulty and discouragement. Especially to those whose out-look is circumscribed by the present time and scene, there will be many seasons of darkness and disaster, when hope wanes, and a feeling of loss and failure beyond recovery or repair, will fall upon the heart. This is true of members of every calling, no doubt, and it may be true, too, that the farmer will rise above such thoughts—will find new hopes and new cheerfulness, more readily than others. So at least we believe—yet it may not be useless to recall some of the discouragements to be met by every tiller of the soil.

One difficulty—and it is not a small one—is the lack of sufficient means to carry our plans into successful operation. We see very often openings for improvements—improvements which would tend largely to our advantage—but which we have no means at command to enter into; hence the sight is only a discouragement. The *product* which we can arrive at, to speak arithmetically, is so much less than a little larger *multiplier* would have made it, that it is difficult to be satisfied with our meager result. We must narrow and compact our plans, or add to our ways and means of carrying them out—the one a discouraging and the other a difficult process, as all will acknowledge.

A second difficulty is to adapt the means at command to the real furtherance of the ends desired. We cannot always readily decide what crop will best succeed on our soil and in the market. What the season will be is beyond our view, and what blights and insects may prevail is generally very uncertain. It is not only true that we cannot, from lack of means, *do* as well as we know, but that we do not *know* as well as we ought, the difficulties to be met, and the best means of avoiding or encountering them. Our remedy is to observe closely the teachings of experience—other men's experience as well as our own—and let every failure or success give us a lesson for the future. We must watch and study even minute particulars influencing results, and then generalize deductions from the whole mass of observations, in order to make them reliable. Principles in agriculture must have more than mere inferences for their establishment—they must be grounded on a long series of like causes productive of like effects.

It is a source of loss and discouragement to the farmer that he has so many contingencies to provide for. He wishes, for instance, to plant a field of corn—it depends on the weather when the land will be fit to work and planted, and largely on that time and the subsequent season, whether the crop will prove profitable or not. If the season is bad, he not only loses in the lessening of the crop, but in the decreased amount of labor which, though paid for, there has been no opportunity to apply. Not only in planting, but in tending, securing, and marketing a crop, there are many contingent sources of loss and vexation. A clear head and a sagacious foresight, may find ample exercise in carrying on the simple operations of a farm, and they are needed, and we believe rewarded as well in the profession of agriculture as in most other pursuits.

Much can be done to provide against loss from changes of season, etc. Some soils are fit to work earlier and for a longer time than others—these are friable and well-drained soils—we must give that character to all our lands as far as possible. Some farmers have the knack of making the most of rainy days, and the odds and ends of time—we must learn the lesson and practice it. In order to do this, it is often desirable to carry on more than one branch of agriculture—combining grain and fruit-raising, stock and wool-growing, and the dairy, to a greater or less extent, so as to have a resort for employment and support should one or more prove unprofitable, as is sometimes the case, and from causes beyond our foresight or control.

A fourth difficulty is to judge of the prospect of the market—to choose the best time and place to dispose of a crop—and also to foresee what will be most likely to repay attention. But this is becoming less and less difficult—the extent of the demand and supply can be known and calculated upon, far more readily than formerly. Railroad facilities for transportation are now such, that prices in the great commercial centers need fluctuate but slightly to be felt in every corner of the land. It is only in the more bulky products that this uncertainty most prevails. These must be at extreme prices to bear long transportation—and a local surplus or scarcity only affects a small portion of country; these prices vary largely with the varying amount produced.

But the greatest difficulty and discouragement of the farmer, as we just remarked, arises from the disproportion which exists between the amount of land farmed and the means employed in its cultivation. Thorough work is always the most profitable; if not at once, it proves so in the long run. The farmer who runs over a large farm will often complain that his crops are a failure, while he who does thoroughly as far as he does at all, will get better returns from his few acres than the other does from many. We should be on the look out for the many things which a wise enterprise and determination turns so readily to advantage. Difficulties and failures should not dishearten; they should make us but the more earnest to overcome them. Study and *push* smoothe the path to success; and there is no success without deep thought and earnest labor. We are afraid that a great portion of the trials and discouragements which many farmers meet, would meet them in every employment, unless undertaken in a different spirit from that with which they now go on their way.

The Indian Corn Crop.

So much has been published in the agricultural papers in past years, in respect to the history, culture, and the value of Indian corn, that it would almost seem that nothing new could be written, or that any thing farther need be said upon the subject. It is now nearly two hundred and forty years since the white man commenced the culture of this inestimable cereal in New-England, and notwithstanding the greatly increased culture of other cereals, roots, fruits, &c., Indian corn has lost none of its importance as an agricultural product, but seems from statistical returns, to be annually increasing in quantity, and in public estimation and value, as one of our important national or staple crops. This is due to its intrinsic worth as a bread and a meat producing cereal, in connection with the facility and certainty of its producing fair returns under proper culture, and the wide range of latitude in which its different varieties can be successfully grown.

In looking over a large number of published statements by different farmers, in reference to the cost and culture of an acre of land in corn, or the cost per bushel, we find a wide difference in their estimates. In these statements we do not refer to the easily tilled and fertile soils of the West, where in favorable seasons corn can be grown at a cost that seems almost incredible to the farmers of the New-England States. But even there the estimated cost by different farmers, ranges all the way from thirteen cents to that of one dollar per bushel. Corn raised at a cost of thirteen cents, and sold at one dollar per bushel, if the crop amounts to sixty or more bushels per acre, pays a large profit for the use of the land, labor, &c., while in the other case the corn just balances the expenses of the crop. But the above contrasts, perhaps, seldom in reality occur. In one case the farmer will charge the highest rate of rent for the use of the land, and for labor and manure, while the other will put the charges at the lowest point, charging a portion of the manure to the succeeding crops, and crediting the fodder, pumpkins, beans, &c., for all they are worth—and this deducted, serves to lessen the charges of culture very much.

There is a great difference in the quality of soils for growing corn. Some soils are so constituted that they will yield heavy crops for a long succession of years, without the use of manures. Other soils are known as naturally good corn land, but require liberal manuring to insure heavy crops; while other apparently good soils, contain so much acid or irony matter, that with good culture and manure, they usually fail to make in the crops profitable returns for the expense of culture. Such soils had better be devoted to some other purpose than that of attempting to grow corn upon them. It makes a material difference in the farmer's profits, whether he grows, at about the same expense, sixty bushels of corn per acre, or only twenty.

In good seasons, with good and careful culture, corn is one of the most profitable farm crops grown in New-England. Of nearly forty crops of Indian corn offered for premium in Massachusetts, the average profit over all expenses exceeded $51 per acre.

In order to insure a heavy crop of corn, in addition to a favorable season the soil should be adapted to its growth, and it should be rich, either naturally, or made so by manure; it should also be well and evenly plowed—the depth of the plowing should be graduated somewhat by the depth of the surface soil, and the quality of the subsoil. After plowing, it is important to have the soil thoroughly pulverized and brought to a fine tilth by the use of the roller, harrow, and cultivator. This greatly facilitates the extension of the roots of the plants in every direction through the soil, and saves much time in planting and after culture. It makes a material difference in the cost of growing an acre of corn, whether it takes one day or four to hoe it each time. We have more than once seen a greater difference in hoeing an acre of corn, than above named.

The varieties of corn are very great; some producing good sized ears, and small forage—others, a much larger growth of "stalks and butts," without anything like corresponding sized ears. Most farmers plant corn for its grain, not for its fodder; the larger the growth of stalks, &c., the greater the exhaustion of the soil. Therefore in selecting a variety of corn for farm culture, it would seem to be an object to grow that variety that would give the greatest amount of grain, according to the amount of forage. As a general rule, those varieties mature earliest that yield the least amount of fodder. Some seasons it is a matter of much consequence that the farmer plant an early variety of corn; therefore we think it is the safest way to plant those varieties, (having reference as far as practicable, to productiveness,) which soonest come to maturity.

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Pipes for Carrying Water.—I have had some experience in carrying water in pipes to supply our dwelling and barn-yard, and for the information of your correspondent I will say, I should use wooden pump-tubes to bring the water from the spring to the house, and from the house to the stable, lead pipes, half an inch, or three-quarters, is better—the wooden tubes may be either white pine, spruce, or chestnut. Logs six or eight inches through, will answer a good purpose, and last a great many years—seven or eight feet long would be a proper length, bored with an augur one and three-eighths of an inch in size. Reed Mills.

The Wire Worm.

On moist, loamy soils of a mucky character, the ravages of the wire worm are sometimes extensive and desolating. An old farmer estimates his losses from this cause, when he first began farming, to be greater than the whole expenses of earrying on his farm and supporting his family; but after becoming acquainted with their habits, and experimenting in their destruction for many years, he now has nearly rid his land of the pest. On sandy and gravelly loams, with but little vegetable matter, they seldom become very troublesome, yet we generally find some in such soils on plowing it after lying long in grass. On newly cultivated ground they are always more plentiful than on old land, probably from not being disturbed during the long period required for passing to the winged or perfect state.

The "Agricultural Survey" of Seneca county, given in the *N Y. Ag. Transactions* for 1850, contains figures and a description of this insect, for popular use—the only one we remember to have met with. Mr. Delafield says:

> "The bug parent is familiarly known as the snapping-bug, so called from the noise made by throwing itself into the air, when from any cause it is turned on its back—the action restoring the insect to its proper position. The worm is about one inch long, having six feet; it is slender, tough, and hard; it is said the worm continues five years before its transmutation to the perfect insect state, during which time it feeds on the *roots* of wheat, barley, oats, corn, and grass."

The remedy suggested is fall plowing, whereby their winter arrangements are disturbed, and their lives finished by the extreme cold. A repetition of this course for a few years will lessen their numbers materially.

It has been said that salt would destroy the wire worm, and the same assertion has been made in regard to lime. Experiment shows that these applications have no effect upon the worm whatever. Some years since, a farmer told us that he had destroyed thousands of the bugs which produce them, by placing straw in rows a rod apart on his wheat fallow, and then, when the insects had collected beneath it, burning the same. But fall plowing and frequent culture may be relied upon, and at the same time furnish the best preparation for the growth of crops.

To fit sward-land which was infested with wire worms, for corn, we should manure and then plow immediately before planting. By this means the worms would be buried out of the way, and supplied with plenty of food in the roots of the grass, so that they would not injure the corn to any extent; such has been the experience of many farmers. For any crop suited to green sward, the same would be a good course; but beyond corn and potatoes, there are few crops which succeed well, and hence most would do better if the sward were plowed late in the fall. Land planted to corn as above, should invariably be plowed in autumn for the next crop, or the product would be likely to be destroyed or largely injured by this pest.

An effectual method to rid the land of wire worm, is to plow very late in the fall, and work thoroughly the next season until time to sow buckwheat, which if sowed the next year also,—following the same plan of fall plowing and culture—will totally eradicate them, giving at the same time two valuable crops. This grain seems quite offensive to the wire worm, and growing close and thick, it leaves nothing for them to feed upon, and thus starves them out. Other plans may be as profitable, but we leave them to be suggested by our attentive correspondents.

Manuring in the Hill for Corn.

The question of applying the usual domestic or barn manures to corn, in the hill at planting, or over the whole surface before that time, is one which we have not seen particularly discussed in our agricultural journals, though often mentioned as practiced, or *vice versa*, in accounts of the culture of this grain. From observation on this point, we conclude it more common in New-Hampshire than elsewhere, where indeed it was learned from the aboriginal corn-growers. We have heretofore, from results in our own experience, recommended manuring in the hill, in addition to a good dressing over the whole field, as productive of an essential improvement in the crop—giving an earlier and stronger start, which advance it keeps through the whole period of growth.

Some experiments in corn growing, comparing hill manuring with its application over the whole surface, are given by Mr. Baker of Oak Hill, in a recent *N. E. Farmer*—and thinking it will interest, we condense the same for our readers. Five plots of an acre each, were planted the last of May. On the first, twenty loads of long manure was spread and plowed under, eight inches deep. On the second, ten loads of fine barn-yard manure were spread on the surface after plowing, and thoroughly harrowed before marking. The third acre was manured in the hills—two quarts of very fine stable manure to each. The fourth received in the hill, one quart of compost—two parts muck, two parts hog manure, and one part each of lime and ashes. The fifth acre, for the purpose of comparison, received no manure. The kind of corn planted was the yellow smut or red blaze, the kernel of which is large and flat, and the ear good size. Making no account of the soft corn, it produced as follows: No. 1, 84 bushels of ears; No. 2, 90 bushels; No. 3, 99 bushels; No. 4, 95 bushels; No. 5, 68 bushels. From these results, he concludes that for present profit, manuring in the hill is the best, and decomposed barn manure harrowed in, produces more effect than green dung plowed under—at least on the first crop.

Most commercial manures, as guano, superphosphates, poudrette, etc., have been applied in the hill exclusively, so we have no means of comparison of the effect of the same broadcast. Of fertilizers of domestic production, hen manure has more generally been applied in the hill for corn than any other material. It is plentiful, of a concentrated character, and readily prepared and applied, while there can be no question as to the profit arising from its judicious use. As hinted before, this manure and others of like character, give the young shoots an early and vigorous start, and enable it the sooner to strengthen itself, by extending its roots to more distant stores of food.

The effect of manuring in the hill exclusively, would seem to be less calculated to benefit the next crop than if applied over the whole ground, though the active or thoroughly decomposed character of the fertilizers thus used would leave little benefit to be expected the second year. But we leave the question with our readers, simply remarking that while we would commend plentiful broadcast manuring in all cases, we would also advise the application of some concentrated fertilizer in the hill, believing it will in all cases prove profitable by forwarding and increasing the crop. Indian corn cannot well be surfeited by high feeding—and above most grains, uses and repays a plentiful supply.

Reclaiming Swamps—Surface Draining.

Swamps and Marshes Abundant—General Characteristics—Draining and Clearing give them High Value—Situation, Conformation and Subsoil—Sources of Water: From Springs and Adjoining Slopes; the Drains Required—A Recent Example of Surface or Open Draining—Eighteen Acres of Mirey Swamp Drained for $50—Clearing and Crop—Treatment Recommended by an Experienced Farmer.

All over our country are found frequent portions of boggy land, covered for the whole or a part of the year with water, and producing little or nothing of value to the farmer. These tracts vary in size, from less than one to several thousand acres, and the character of their vegetation is also varied. Some are covered with coarse ferns, flags, and grasses; others, with small bushes; others still, with alders and willows, and an occasional elm, birch, soft maple, or black ash sappling. They are characterized alike however, by a deposit of muck of a greater or less depth, and by the presence of sluggish or standing water for a considerable portion of the year. To render such lands of the highest value for agricultural purposes, draining and clearing are necessary, and it is of these operations that we propose to speak in the paragraphs which follow.

The water—the original cause of the swamp or marsh—sometimes arises from springs, which break out in a comparatively level spot, and from a sluggish stream which overspreads and saturates a comparatively wide surface; in other cases, the water seems to run in principally from the higher land surrounding it—the marsh occupying a natural depression or basin. In most, if not all cases, the subsoil is of a retentive character, (otherwise the muck would not have been formed,)—often a pure blue clay, through which water penetrates with great difficulty, and in almost inappreciable quantities.

Where springs supply the water, good and sufficient drains should be opened to carry it readily away. If a number of springs exist, each one must thus be tapped; and if possible, the general outlet should be of sufficient depth to take off all water within three feet of the surface. If the springs are numerous, and, as in some instances coming under our notice, do not come to the surface in any very marked places, the ditches should surround the boggy plot as well as penetrate it at frequent intervals.

When the supply of water comes from rain and snow, and the drainage of surrounding slopes, aided by the retentive character of the subsoil, a different treatment seems necessary. Ditches must intercept the inflow of water—running around the plot at the point where upland ceases and swamp or marsh begins. These will divert and carry away the surplus water, and by the aid of frequent drains across the marsh, proportioned to its extent, will soon change the character and value of the land. The stagnant pond, the miry slough, and the boggy marsh, will soon become firm ground to the foot of man and beast, and when cleared, will yield most ample and surprising returns for the expenses of so desirable an improvement.

As a recent example of *surface*-draining of swamps, (we will give one of *under*-draining hereafter,) we may cite the reader to the statement of C. L. Kiersted of Ulster Co., given in the March No. of the *Journal* of our State Society, and to whom was awarded a premium of $10. He had on his farm eighteen acres of such land, "most of it covered with roots and stumps; the surface very soft—cattle or horses could not go upon it, except after a long drouth, without becoming mired." In company with the owner of the adjoining lands, they opened an outlet at an expense to each of about $25—a part of the work too often hindering the improvement of such lands materially, for the want of union of purpose between those interested. During the season he fitted twelve acres for crops—seven in time for planting to corn. He cross-ditched and drained it, and plowed with a lap-furrow, it having a sward of water grass; prepared it for planting in the usual way, but on the most of it, put a small handful of horse manure in each hill, with a view "to warm the hill." The manured part yielded some 185 bushels of ears per acre. After finishing this, he drained about five acres more by cutting a ditch around it, three feet deep and a little over four feet wide at the top; on this he grew turnips, cabbages, and buckwheat. He afterwards ditched the remainder of the lot in the same way, drawed out the roots and stumps, cleared off the briers and bushes, and has the entire plot plowed for corn the present spring. It is in beautiful order, as mellow as ashes, and he confidently expects a large crop. The whole expense of draining incurred by Mr. K., is $51.40, and the land is now valued by him at $200 per acre.

Mr. Kiersted says he has had many years experience in draining swamps in Greene county, (his home until within the last three or four years,) and always met with the best of success—has made them the best and most productive of any part of his land. He prefers open ditches to covered drains—cleaning them whenever it becomes necessary. (We have found a good deal of cleaning necessary in our own experience, in a case where the fall was slight, and the earth through which the outlet must be dug, the hardest kind of hard-pan.)

The culture and crops Mr. K. recommends are worthy of mention, and must close our present notice of the subject. "Swamps composed of peat or muck, should be planted with corn or potatoes at least two successive years, then seed down in the fall with about half a bushel of timothy—keep it in grass but two years, then plant again, use 200 bushels slacked lime to the acre; plant two years, then seed again—the longer you work it in this way, I think, the better."

Milk for a Pound of Butter.

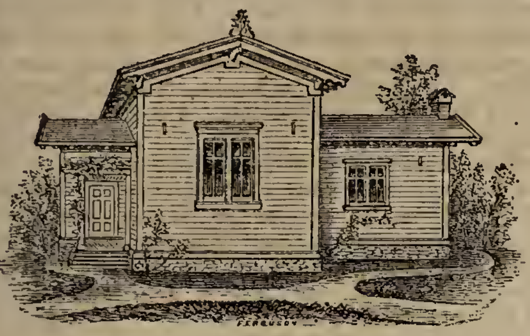
MESSRS. EDITORS—The article in the "Country Gentleman" of 24th ult., headed "Milk for a pound of Butter," induced me to test the yield of my cow, which calved on the 13th of January last.

During the week ending yesterday, March 7th, her calf being now nearly 8 weeks old, she gave 128 quarts of milk, which yielded 14 pounds 9 ounces butter. This is a large return, but would have been still larger, had the last three days been equal to the first four, which was not the case, owing to the cow's indisposition. Her best yield was large, 2 pounds 2 ounces butter per day, from an average of 19 quarts of milk.

She is a large, heavy cow, short-horned, black with white marks, and about 9 years old.

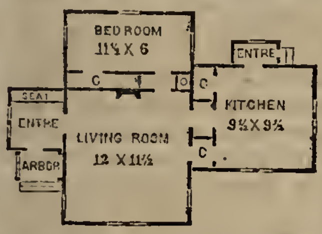
Her previous calf was born 1st of August, 1856. From various causes she did not produce another until the date first mentioned, and kept in milk in to October of last year, more than two years and two months, when I dried her, her milk having been sufficient to supply my family during most of that time.

Of course, as I did not breed this cow, I have no merit in the matter, and can only say that I consider myself very fortunate in having her, but I should like to see a better return. SUBSCRIBER.



Laborer's Cottage.

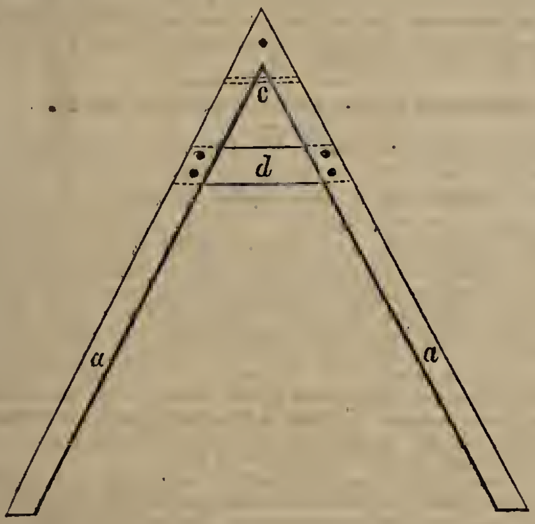
The accompanying design of a neat and ornamental laborer's cottage, was furnished by **Lawrence B. Valk**, architect, 627 Broadway, New-York. The views and plans furnish of themselves all the necessary information in relation to it, being but one story. He assures us it was actually erected for $360, for the owner in New-York. A peculiar mode of ventilation is adopted, the openings for which are indicated in the view, but he has not favored us with an explanation of the mode.



* * *

Stump Machine.

Eds Co. Gent.—In your issue of Feb. 24th, a Maine correspondent gives a description of his stump machine. After careful study, I must confess I cannot understand the "modus operandi" of the machine. I have seen machines costing from $200 down to $3, and for efficiency, the last are the best. In the Cultivator, some fifteen years ago, there was a cut and description of a machine, which we have tried; and it invariably work well. I enclose a drawing and description (lest your old cut may be lost.)



a a—Side pieces, 10 ft. (or more) in length.
b—Cross pieces, 2½ ft. long, 8 inches wide, and 2 inches thick.
c—Bolt of iron 1½ inches in diameter (to draw by.)

The side pieces may be of peeled bass-wood, or hemlock, 6 inches in diameter; or of *good* soft wood scantling 6 inches square. An iron band should be put around the apex. The bolt c should be as near the top as possible, leaving enough room for the chain hooks. Cost about $3.

Now for the "modus operandi." Yoke up the oxen (or harness the horses; either can be used,) borrow chain enough of your neighbors, so that you will have 60 or 80 feet; the more the better; hitch a chain hook on the bolt of the machine, drawing it as you would a three cornered harrow. When you get to the stumps, dig on one side of one, so that a chain can be passed around a strong root. Set the machine up, astride of the stump, leaning a few inches from the perpendicular, towards the side where the root has been dug around. Hitch your strongest chain to the root and to the bolt c. The remainder of the chain goes from the bolt to the team. Start the team slowly, and as the machine rises to a perpendicular, it lifts the stump a little, and the chain being so high the stump is easily pulled over. The lifting power at first is immense, and if the back chain is not very strong it will snap. The machine might be made still higher, but it would be too heavy for two men to set upright. If a man made it for himself the whole cost would not be over $1 50 D. A. A Nichols.

* * *

Winter Cherry—*Physalis viscosa.*

Messrs. Editors—As most persons like a "good thing," I wish to call the attention of your many readers to a vegetable which is, undoubtedly, good. It is the Winter Cherry,—*Physalis viscosa,*—a plant that should be cultivated in these times when the larger fruits are scarce. It has various names, as the Ground Cherry, Tomato Gooseberry, French Tomato, Strawberry Tomato, etc., but its true American name, Winter Cherry, is given it from the fact that it will keep three or four months as good and fresh as when gathered from the plant, by being put away in boxes in the husk or capsule. The plant grows about two feet high, branching, leaves entire, pubescent; fruit enclosed in a husk or inflated calyx, from which it gets its generic name. The fruit is about one half an inch in diameter and of a light orange color, and when very ripe it is transparent. It falls to the ground when ripe, and can be seen through the husk.

It is one of the best fruits for pies there is; makes a preserve which tastes very much like honey; makes an excellent pickle, and is said to make an excellent wine; but it is chiefly used for pies and preserves. It is cultivated much the same as the tomato. Planted about the first of May, it will come up about the last of the same month, and you will have ripe fruit the last of August. The seed is "slow, but sure" to germinate. It is a good plan to sow some of the seed in a hot-bed, to have a few early plants. It yields abundantly, sometimes a quart to each plant, and consequently it takes but a few plants to supply a family with plenty of fruit.

When once introduced into a garden, there is no fear of losing it, as it will come up from seed dropped the previous fall, and I think that if it is once tried and cooked, no person will be willing to be without it again. It is truly a valuable fruit, and I think will ere long be grown in most places, at least it should be. F. A. Fleming. *Curwensville, Clearfield Co., Pa.*

We procured the seeds of this plant from our Shaker friends at Niskayuna, ten or twelve years since, and have never had to sow them since, as an abundance of plants spring up in the spring from self-sown seeds, proving their entire hardiness. Many persons are very fond of them, and as they are a sure crop, are well worth planting. We have kept them in a drawer where they would not freeze, through the winter, as sound as when first gathered., and with rather an improvement in the quality of the fruit.

There is another variety of this fruit. *Physalis Alkekengi*, a native of the south of Europe, which we have not seen, but which is said to be nearly double the size of the Viscosa, and of equal value for eating and culinary purposes. Wm. Thorburn of this city, has the seed of the Alkekengi for sale, and will have the seed of the Viscosa if it can be procured.

* * *

Board Drain.—A good under-drain is made by digging a ditch three feet deep, and one foot wide in the bottom. Split boards fourteen inches long; set them in at one side, and lean the upper end against the opposite bank. A little brush or hay should be thrown on them and then fill up. P. M. *Des Moines, Iowa.*

Visit to a Swiss Cheese Dairy.

From a letter from a correspondent, published in the Country Gentleman, we select the following account of a visit to a Swiss Cheese Dairy, on one of the highest mountains of Switzerland:

We had not been there very long before the weather became cloudy, and we decided to go to one of the chalets, which we saw in the distance, surrounded by a herd of cows, and otherwise showing signs of being occupied, to rest us for a short while and wait for the shower to pass off. Our path led us among the cows, a large herd of fine animals of the Swiss breed, well known for its milk giving qualities; the cows are large and bony, but ill-shaped for fattening purposes, being very large feeders, and I believe not very easily kept, but giving a great quantity milk, the average product of dairy cows being about 1000 gallons each, every year, and a great many cows milking from six to eight gallons a day, when fresh, but the milk is not as rich as it is generally in this country. It is not without some anxiety that the traveller passes through one of these herds, for although the cows are very gentle, they are generally accompanied by a bull, who is often very dangerous from being ill-natured, and woe to the stranger who excites his displeasure, if no tree or rock is at hand to hide him. Accidents from those animals are very frequent, and a mountain where it is known that the bull kept is ill-natured, is avoided by every body. We passed without accident, and in the house found two or three men who received us kindly, and I resolved to take the opportunity of viewing the whole establishment, and to take all the information possible on their business.

As it may interest your readers I will try to describe all I saw there in the way of cheese making. Switzerland is renowned for its cheese, which is one of its staple products; some of them, such as Gruyere, rank among the best in the world; and the largest quantity is made on the mountains, in such chalets as we were in. The building was made of stones, low and tight; one end of it used to stable the cows, and partitioned in stalls provided with halters to tie the cows; the floor was laid with strong planks, worn so smooth by use, as to make it difficult to stand upon; the cows were stabled night and morning to be milked, and the manure cleaned, and the floor swept twice a day; at the other end of the building, separated by a stone wall, stood the kitchen, used as well to cook as to make the cheese, and above was a kind of loft where the men slept. The whole establishment seemed of the most primitive order, and the utensils very few in number. Soon after milking, the milk yet warm, was poured into a large kettle, and heated to 78 or 80 degrees, then curded; after a while the curd is finely broken with the hands, and then heated again to the same heat for only a few minutes. The curd is then gathered with a large milk pan, all at once, and immediately transferred to the press. By that method the cheese keeps all its flavor, and is most tender, the curd being very soft. After it has staid about two days in the press, it is carried to the cheese house, a tight log house, the logs hewed square and laid close one on top of the other with moss in the crevices, and there rubbed with salt and turned over every day for a few weeks, and then carried down in the valley where it is sold to large dealers in the fall, and brings about six cents a pound. The Swiss cheese is very delicate while young, and neither cloth nor paint can be used to protect the rind, as it must be rubbed with salt; and to enable it to cure well the cheese house must be tight and not too dry, to prevent the rind from cracking. The grass on the mountain is generally short, very nutritive and high flavored, and the method of the cheese makers is evidently adapted to give all the strength and taste of the milk to the cheese.

These chalets are often extensive establishments, containing sometimes upwards of two hundred cows; the cows do not all belong to the same men, but are generally rented for the summer from the farmers in the valley, by the chief dairyman, who also rents the pasture and buildings and hires hands to help him in his work. Their life is not laborious or disagreeable, but they are often very lonesome, especially on those mountains which do not possess attractions for the travellers; they hardly ever see anybody during the entire summer, and their only intercourse with the world below them, is when they go for provisions, which they must carry on their backs from the villages. The men we found in the chalet on the Rochers de Naie seemed perfectly contented and in good spirits; they were kind and obliging, showed us everything, gave us plenty of cream, and charged full price for it, and otherwise seemed perfectly well posted in the ways of the world.

In the valleys, the farmers who do not rent their cows, or after they have come back, associate together to keep a dairyman to make their cheese. In every village is found a large building used as dairy-house; there, night and morning, the farmer brings his surplus milk which is credited to him, and when his turn comes to get the cheese, he is charged all the milk brought that day, and his account balanced; if he is yet in debt he must bring on milk till he is even, before he starts a new account; the dairyman is boarded and paid every day by the person who gets the cheese. The building and utensils belong to the village corporation and are used free of charge, every inhabitant, however poor, having a right to profit by the advantages of the establishment.

Keeping Bees in Rooms.

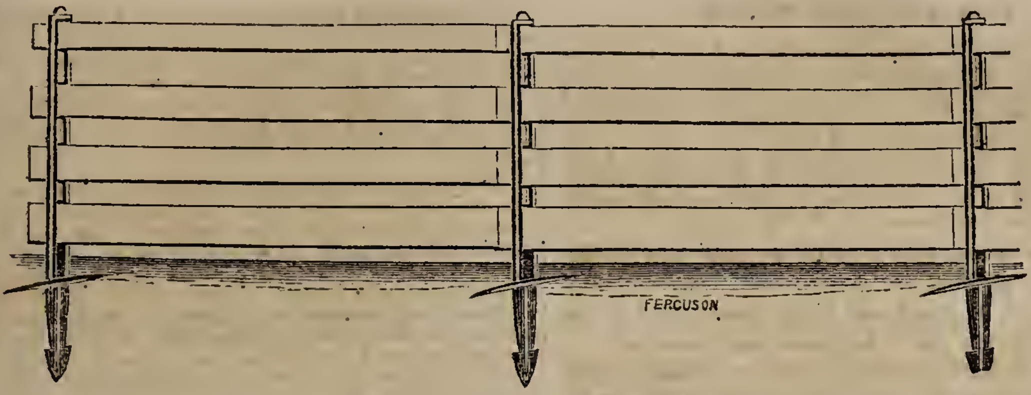
Messrs. Editors—I have in my wood-shed chamber a box four feet high and three and a half feet each other way, in which I have kept bees for twenty years, and I think it is the plan which W. R. in the Country Gent. of Jan. 27, would like. I set a common hive on a shelf which covers about one-half of the bottom of the hive, and the shelf is about two feet from the bottom of the box, and on the front side. After the bees fill the hive, they work on the outside, and there should be a few slats laid in so that they can fasten their comb to them. I keep the box perfectly tight and dark, except where the bees go in. I have never had them swarm, kept in this way. In cold weather, we take out honey as it is wanted, and I never saw it of finer quality from any source. It will be necessary to change the swarms after they become old, and the comb in the hive too much filled with bee bread, &c. H. *Shelburne, Vt.*

Remedy for the Squash Bug.

I should think that Mr. I. W. Briggs, with all his ingenuity, would long ere this, have discovered a remedy for the "bugs" that infest squashes, cucumbers, pumpkins, &c. I give the remedy. Take a quantity of poppy leaves, stalks, buds, &c., or any part of the poppy, and steep in water either cold or hot; and if poppies are not to be had, take a small quantity of opium and dissolve it in water. This liquid, applied with an exceedingly fine sprinkler to the vines once or perhaps twice, will cause the "varmints" to leave the plant never to return. Where they go to I do not know, neither do I care. It will not kill the bugs, for they know better than to *take* anything of an opiate nature. Let friend Briggs try this, and whatever "humbugs" there may be in the world, I can assure him there is no "humbug" in this.

The same liquid, applied with a squirt-gun to apple trees, effectually prevents the ravages of the apple tree worm. An ounce of opium would probably be sufficient for a large orchard. G. W. Durant.

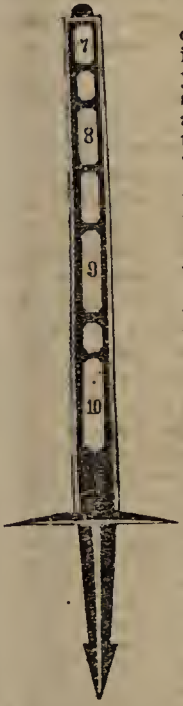
Turnip Fly.—If "Gustavus" will apply unleached wood-ashes, immediately after covering his turnip seed, (say a good sized handful to each hill, if planted in hills,) directly over the seed, I think it will in a great measure prevent the ravages of the bug or fly, and it also keeps the soil moist and loose, thereby causing the seed to vegetate sooner, and come forward more rapidly afterwards. Wm. F. Bassett.



JENKINS' CAST-IRON FENCE POSTS.

Jenkins' Cast-Iron Fence Post.

Messrs. Editors—The numerous letters of inquiry received by both Mr. Jenkins and myself in relation to the *Cast Iron Fence Post*, since the publication of it in the Country Gentleman of the 13th ult., has induced me to send you an engraved illustration of it, and of the fence built with it.



I do this, not, I assure you to impose on your time or space, but because these inquiries all come from the readers of your valuable paper. Occular demonstrations are always more intelligible and satisfactory than verbal ones, particularly of new inventions and articles with which the reader is not familiar.

The length of this post is six feet; breadth, three and a half inches; length below cross-piece, eighteen inches, tapering and terminating in a barbed or spear head bottom. Cross-piece eighteen inches long, with mortice or slot in middle, through which the post is inserted, and made to wedge firmly at the depth of eighteen inches—the margin of the post on both sides is provided with a band or flanch five-eights of an inch wide to stengthen the main plate, which is one-quarter inch thick, and below the cross-piece on each side is a rib for the same purpose. The mortices for the boards are all two inches wide, and the first or bottom one, ten inches long—the second, nine—the third, eight, and the fourth, seven—these can be made any size required.

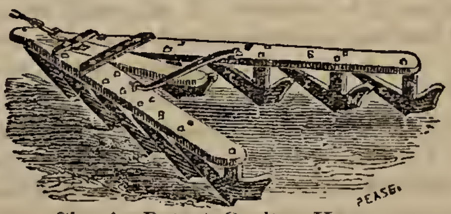
A three board fence, constructed with this post, properly banked or ridged, is thought by most who have examined it, of sufficient height for any ordinary farm fence. The fence built by Mr. Jenkins, some eight years ago, (mentioned in my former article,) is a three board fence, (and common inch hemlock at that,) without any stay lath or other support for the middle of the panel, and standing on the side of a public road. Mr. J. tells me this fence has never been repaired. and now stands as erect and apparently as good as when first built, not having been disturbed by cattle or the frost.

I would, in all cases, except when used for hurdles, recommend this fence to be more or less banked or ridged, as its permanency depends very much on the cross-piece being buried from six to ten inches. When the plow is employed to construct the ridge, a team without whiffletrees should be used, or else the ridge should be made before setting the posts, as otherwise there is a risk of breaking the posts by the whiffletree coming in contact with them. For prairie fencing, this post cannot be excelled.

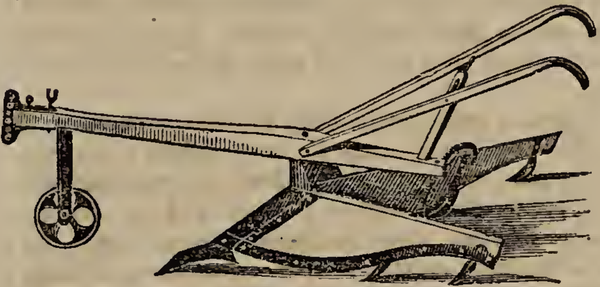
In answer to the inquiries as to their strength, let me here say that my friend, Mr. Jenkins, who has had them in use so long, and never one broken in the fence, and others who have examined them and the fence, entertain no doubt of their sufficiency for a good and substantial cattle fence. As all ordinary forces must necessarily be applied to or against the edge of the post, it offers the resistance to all such forces of an iron bar three and a half inches across, by at least half an inch in thickness. A. S. Rowley. *Hudson, N. Y.*

Shares' Cultivating Implements.

We recently published an engraving of Shares' Potato Covering and Hoeing machine. We now add engravings of the two other implements invented by Mr. Shares. The three are manufactured by Messrs. Pease and Eggleston of this city, to whose advertisements the reader is referred for further particulars.



Share's Patent Coulter Harrow.



Share's Cultivating and Hilling Machine.

Scotch Fife Wheat.

C. (Wisconsin) writes deprecatingly of the "Fife" Wheat, as compared with the Club variety. Club Wheat was a favorite here, until the "Fife" or Scotch Spring Wheat was introduced some years ago. It has held its ground against all competitors as yet, and our millers have never raised the objection spoken of, while the Perth bakers (Scotch) who make as good bread as is produced *anywhere*, give it the preference over every other Spring variety. Out of 100 returns for 1858, to our Bureau of Agriculture, 60 state that no rust affected the "Fife or Glasgow Spring Wheat," and no returns state that it did, although the rust has this year been nearly as destructive as the midge. From rather less than two acres of fair land, only moderately manured, and a season unusually wet, seed sowed broad cast, we measured 60 bushels of Scotch Spring Wheat, as it came from the thrashing machine, with cleaning apparatus attached. The wheat weighs about 62 lbs. to the measured bushel—yields in flour, after the miller takes his toll, (1-12th) 42 pounds., besides the bran, &c. Better tillage, and the seed drilled in, would give larger and heavier heads. W. O. Buell. *Perth, C. W.*

Pumping by Wind.

I wish to pump the water out of a pond of three acres, in order to get the mud or muck for manure. In order to do this, the water is to be raised 28 feet and led in a spout over a dam. The pond has no outlet, and in summer is quite low. Can any of your subscribers inform me how I can best rig a pump to go by wind power, to accomplish this. If so, please publish in the Cultivator, which paper I take. What would be the probable cost of such a pump and fixtures? S. W. Randall.

There are two ways in which this water may be discharged, and perhaps one or two more. The two first-mentioned are by wind and horse power; and if the ground admits, the use of a syphon may be added.

A "horse-power" is reckoned equal to raising 33,000 lbs. one foot a minute, but common horses will not do much more than half his. Three acres are equal to 480 square rods, or about 130,000 square feet; consequently to lower the pond one foot would require the lifting of 130,000 cubic feet 28 feet high. Making allowance for the friction of machinery, one stout horse would raise about 250,000 lbs. a day, and it would require the labor of a horse at least one month to lower the pond one foot. Our correspondent does not inform us the depth of the water, and we cannot therefore say how long before the drainage would be effected. A wind-mill with sails each five feet long, would work with about the force of one horse in a brisk wind—supposing such a wind to blow half the time, it would require two months to lower the pond a foot. We are unable to state the price of Halladay's wind-mill of this size, (the only self-regulating wind-mill whose operation we have witnessed, that has uniformly succeeded,) but we think with all the necessary fixtures for its successful working, it would cost two or three hundred dollars. A forcing pump would answer, or a very well made suction pump, for 28 feet.

A syphon would undoubtedly be best and cheapest, if a place of discharge could be found within a few rods of the pond, which would be a few feet lower than the pond itself. Such a syphon made of lead pipe two inches in diameter, would discharge in twenty-four hours about the same quantity of water as one horse—if three inches in diameter, more than two horses.

Our correspondent will perceive that any thing short of cutting a permanent ditch to drain the pond, will be attended with much trouble and considerable expense, to remunerate which, a very large quantity of manure must be obtained.

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Sugar Cane Mills.

Messrs. Tucker—I noticed in the last number of your paper, an inquiry in relation to what is the best mill for pressing Sorghum? This has been a question of some importance with us, and quite a diversity of opinion as to whether iron or wood mills were preferable.

The iron mill has the advantage of a larger yield of juice by 20 or 30 per cent. from its harder pressure; but the wood mill, will be more than that per cent. a head in the *quality* of the product. The trouble with iron rollers is simply that the *citric acid*, contained in the fresh juice, acts upon the iron, and by corrosion of the surface, diffuses a dark color and an unpleasant flavor to both the syrup and sugar, and it is claimed by some that it also prevents granulation.

Very considerable quantities of molasses, and some good samples of sugar, have been made in this vicinity, and the subject has received a good deal of attention from intelligent men; the best samples by far we have produced have been by mills made with rollers of wood.

The recent improvement in iron rollers, noticed in your last paper, patented by Mr. W. T Dennis, Richmond, Ind., completely meets the objection heretofore existing against their use, and meets with very general favor as the annexed resolution, passed at the late meeting of the Indiana State Board of Agriculture, will show:

Resolved, That the improved sugar mill roller, presented by Mr. W. T. Dennis, is recommended to sugar growers as entirely obvating the difficulties in the use of the iron rollers.

This improvement simply consists in plating or coating the iron roller with *tin*, or any anti-corrosive metalic composition, by which the discoloration is prevented. This process is applicable to any construction of mill, and is easily and cheaply applied. The mill in use among us, is made with three upright rollers, twelve inches diameter and eighteen inches long, geared to work together by pinions at the top of the upper plate, the first and second roller working ¼ inch distance, and first and third in close contact. Upon the upper end of the shaft of the first roller a lever is fixed like a cider mill, to which the horse is attached, and the canes are fed in by hand. These mills should be made with wrought iron journals, and otherwise strong, as there is great strain upon them.

There will be a large amount of sorghum planted in this State (Indiana) the coming season, and there is hardly a doubt but the whole corn growing region of the west, will, in a very short time, produce their own sugar and molasses, in great abundance and of excellent quality. Indiana.

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Raising Potatoes Under Straw.

Editors of the Country Gent.—I think it is at least fifty years since I first saw this plan suggested—in the almanac perhaps, and that, in the average, it has been repeated as often as once a year ever since.

Upon it I remark: 1. The general suggestion is wise. Straw keeps the soil both cool and moist, two most important conditions in the culture of potatoes in a dry summer. Uniformity of moisture and temperature is important in the growth of any vegetable, but especially of one that is tropical, as is the potato, though coming from the mountains there, and hence not requiring much heat.

2. The plan, however, as it is usually proposed, is of little practical value. Thus, a writer in your paper of Jan. 13th, p. 27, laid his seed on the unbroken sod and covered them eight or nine inches thick with straw. He got from *half a bushel* of seed, a *whole bushel* of potatoes—yes, a *whole* bushel, and he thought he did well. For the honor and recompense of the farmer I hope there is not one within a hundred miles of this experimenter who will endorse this judgment. So far from approving of this mode I would plow the ground deeply and well, and furrow deeply also. Then drop the seed and lay the straw on the top of it, using more or less as you have much or little. Last of all, cover the straw with a light covering of earth. This mode will make the straw spread from ten to fifteen times as well as by the other mode. This is the precise mode practiced in the States of Georgia and Mississippi, where potatoes are deeply planted and deeply mulched in November, December, or January, according to the distance south. In this way alone can they secure coolness and moisture sufficient for the common potato, their dry, hot soils being much more natural to the sweet potato. Thus cultivated, the crop is dug in March, April, May, &c. Where straw is laid on the top of the hard ground the potato will not readily draw a sufficiency of nutriment from it, nor will the straw retain its moisture half so well as when covered, nor yield as much food, since "one straw under ground is worth two above."

3. This plan does not include straw alone, but any loose mulchy substances, such as weeds, cornstalks, tanbark (if limed,) sawdust, &c. Indeed, the superiority of well drained swamp muck soils, when old enough to have become sweet, and green swards, for the potato crop is explained on the same principle. Both are retentive of moisture and poor conductors of heat, and thus serve to maintain a uniformity of condition about the hills of the potatoes. At the same time by the gradual decay of the muck and the sward the plant is fed in a more even manner than when the soil is fortified by fresh manure. In all cases the loose texture of these materials is favorable to the ready formation of the tubers under and in them. (See my thoughts on these points in my essay on the diseases of the potato, in the New-York Agricultural Transactions of 1851, pg. 385 and 392.)

4. The plan when confined strictly to straw, even including weeds, sawdust and tanbark, is of very limited availability; for whence, it may be asked, are these materials to be obtained in a quantity one-tenth adequate to

the requisition of potato culture in our country? The ordinary production of straw on a farm would be nohow sufficient to answer the requisition of the potato crop, if always cultivated in this way; and in any case it would be used at the expense of robbing the farm stock of needful bedding. The loss of this straw from the stable and barnyard, would, moreover, lessen the quantity and quality of the manure very far beyond its benefit to the potato crop. Let the farmer ordinarily devote his straw, and other similar waste materials, to the purposes of the barnyard, while he avails himself of reclaimed swamp grounds, but especially of greensward deeply plowed, for the culture of his potato crop. It will certainly sometimes happen that the beauty and even the measure of his potato crop may suffer from worms in greensward, especially when *old* meadows and pastures are broken up. But this occasional drawback will not nullify the general economy of the plan. C. E. Goodrich. *Utica, Jan.* 22, 1859.

The Sweet Potato at the North.

There are thousands in the northern states who would be glad to raise this luxurious esculent for their own table, had they the evidence that it could be done, and without an unreasonable expense. They have generally supposed that its culture must be confined to the warm climate and long seasons of the south. There is its home—but by being gradually acclimated, it has finally found its way into the appreciating hands and *grounds* of the northerner. During the past two or three years, the efforts to introduce it into New-York and New-England, as well as the north-western states, have been decidedly progressive. The results of these experiments have generally been quite satisfactory—flattering to the experimenters. Many are now so well satisfied of the successful culture of the sweet potato among them, that they are contemplating growing them on a more extended scale in future, for marketing.

The sweet potato as now cultivated in New-Jersey, Northern Virginia, Ohio, &c., is quite different from those of the Carolinas, Indies, &c., being acclimated to this northern climate. The variety which has proved the best adapted to the north, is called the *Nansemond*, from the county in Virginia whence it was taken to New-Jersey, &c. The southern or Carolina tubers are unfit for the north for seed—even at Cincinnati they are never tried but once.

The Nansemond has the quality of being good for table use at any stage of its growth—a peculiarity. We believe this variety to be superior to others for the north, in every respect. Persons who have tried this with others, have invariably given their opinion in its favor; as far as we have known, and we have some knowledge of the matter.

We saw this variety growing finely the past season in Vermont, (at 44 degrees of latitude,) and ate of them the fore part of September. The product was very satisfactory. The same individual had grown them there for several years, procuring seed and plants from southern Ohio.

The sweet potatoes carried into the northern states for table use, are often injured by long carriage and exposure, and many persons who have eaten of these badly cooked, in inexperience have pronounced them "about as good as a frozen Irish potato!" and conclude that the sweet potato is not fit to be eaten

They may be baked or boiled; we prefer the former. A good way is to boil till nearly "done," then place them in the oven to finish, which will make them dry. The main thing is to have them cook quickly. Our folks make excellent pies of them, much in the same manner as pumpkin pies; they prefer sugar for sweetning, and use one egg for two pies. We never get tired of having sweet potatoes on the table—they are the favorite dish the year round.

The sweet potato is propagated by placing the tubers in hot-beds during the month of April, with three or four inches of loose, rich soil over them. The plants are pulled from the tubers about the time the first leaves have attained full size, which takes three or four weeks generally—more or less time, according to the condition of the beds and weather.

This mode of starting them is necessary, on account of our growing season being so much shorter than that of its nativity. The ground for them is prepared into hills or ridges, (we prefer the latter for general culture,) made high and narrow, so that they may receive the sun's warmth. The plant throws out a number of runners, which often cover the ground with their growth, and produce a beautiful sight. Persons at the north will find it better to procure *plants* from points where this potato matures, except when planting largely. They can be packed by those experienced, to go to almost any point in the northern states where railroads and expresses will carry them—the charge generally comparatively small.

Northerners, *try* this luxury! Success and gratification will be the result. Any soil that will produce corn well, except that which is too rich in vegetable mold, will produce sweet potatoes; the latter soil causes an excessive growth of vines without forming tubers in proportion, in our short seasons. Use animal manure in preference to vegetable—ashes are good. C. B. Murray. *Twenty Mile Stand, Warren Co., Ohio, Feb.* 21, 1859.

Winter Bouquets.

We have now in our parlor a very pretty bouquet, which was made in the autumn of 1857—the flowers not yet faded.

To those of your readers who would like to have a fine winter bouquet,

When the last rose of summer
Has faded and gone,

let me recommend the following plants, viz:

Acrolinium roseum.
Globe Amaranthus, purple, white and orange.
Eternal Flower, golden and white.
Quaking grass.
Rhodanthe Manglesii.

And any other handsome everlasting flower which can be procured. But the above will do very well with the addition of a few handsome grasses, which can be obtained in almost any locality.

The seed of the above can be purchased for about five cents a packet, and should be planted early in the hot-bed, or in the house, and transplanted as soon as the garden is in order, or the weather will admit.

Gather the flowers before they begin to fade, being careful to have long stems; hang them up to dry, and it will not be long before your bouquet can be arranged to gladden your eyes through at least one cold winter. W.

Making Vinegar Rapidly.

Mersrs. Eds.—Can you inform me through The Cultivator, of any way to convert cider into vinegar quicker than by the natural process of fementation, which generally takes from one to two years. I. L. D.

In ordinary cases the cider having first become fermented so as to render it alcoholic, may be hastened in its change to vinegar, by the presence of a small portion yeast, brown paper, and grape leaves. It must have air, but not too much—a partially closed bung hole will admit enough—and a warm temperature. The following mode is however much more rapid:—

A barrel is filled, except a vacant part at the bottom with wood shavings. The top is closed by a pan, which fits into it, the bottom of which is preforated by a number of small holes, and through these short threads are passed, to bring down the liquid more rapidly. The shavings, before using, are well steeped in vinegar, which of itself strongly induces fermentation. Near the bottom of the barrel, its sides are perforated by a number of holes half an inch in diameter, for the admission of air, which passes up through the shavings, and escapes through several tubes, passing up through the pan and through the liquid in it. An alchoholic liquor, mixed with about a thousandth part of yeast or honey, is then poured into the pan, and it trickles down the orifices by the threads, spreads over the shavings, and thus has its surface very largely exposed to the air. Before pouring into the pan, it is heated to about 75 degrees, the rapid absorption of oxygen among the shavings soon raises the temperature to 100 degrees; the heat causes a current upwards by the holes in the barrel, through the shavings, and by the tubes in the pan. by which the supply of oxygen is kept up. The liquid passes down, and escapes through a pipe at the bottom. The operation is repeated, and after passing through in this manner three or four times, the liquid is converted into excellent vinegar; the whole time not exceeding twenty-four to thirty-six hours. Eds.

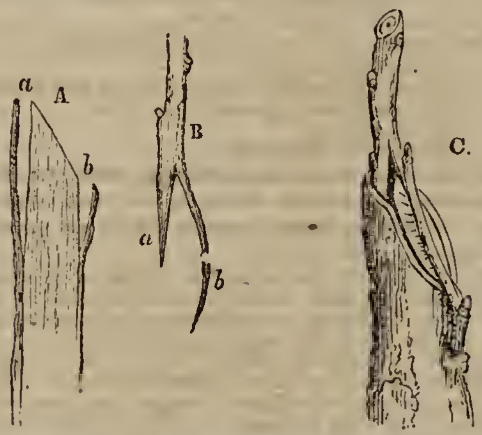
To Drive Away Rats.

It is stated in the *Boston Cultivator*, that cotton batting sprinkled over with pulverized potash, will drive rats from premises infested by them, if crowded into their holes.

Saddle Grafting.

[The following modo of grafting has been long known to some propagators, and is figured and described on p. 40 of the American Fruit Culturist, from which we take the third figure, being a little more distinct than the sketch from our correspondent. We give his description, being minute and accurate, aud the result of full experience.]

MESSRS. EDITORS—In reply to the inquiry of A. H. A., I send you the accompanying rough sketch and description of a method of grafting, which differs slightly from any method I have ever seen described, and which I have found to succeed admirably for stocks one-quarter to three-fourths of an inch in diametor, especially plum trees, which may by this method, be grafted at the usual time of grafting the apple. It will answer either for small trees, or the branches of larger ones.



A. represents the stock prepared for the scion, by cutting it off with a sloping cut, and two slits, *a.* and *b.* made by passing a sharp knife down those two sides of the stock, a little into the wood.

B. is a scion made to fit A.—*a.* being inserted into the slit *a*, and *b.* into slit *b*., by passing cver the sloping cut and bending at the point, as seen in C., which shows the scion and stock fitted to each other.

The whole is then tied, so as to keep all parts in place, and cemented to exclude the air. When it has grown so as to be in danger of the strings cutting into the bark, they should be cut loose.

I have always succeeded by this mode from the first, and believe it almost sure. I think it not nccessary to take any care about matching the inner bark of the stock and scion W. F. BASSETT. *Ashfield, Mass.*

Potato Culture.

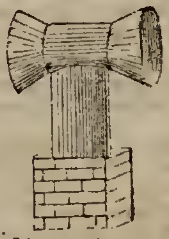
We have had some very pleasant and satisfactory experience in raising potatoes, from planting simply the *eyes*, just rimming them out with the point of a narrow knife.

We selected the largest and best potatoes from the cellar, took out the eyes, and used the rest of the potato for the table, about as profitably as if the eye had not been taken out. They were then planted three in a hill or place, about one foot apart, and in rows some two feet apart; and then cultivated often enough to keep the weeds down, and to keep the ground stirred and mellow.

The result was, we gathered a fine yield of *large* potatoes from every hill, with no small ones—a very important consideration in harvesting or picking them up. Besides, we had no diseased or unsound ones; although in the adjoining ground, where we planted *whole* potatoes, there were many unsound ones at the harvest. Hence we believe, that where there are large quantities of the old seed to rot in the hill, it is likely to affect the young tubers unfavorably; and also where there is too much seed in a hill, it produces too many tubers, so that the young potatoes grow badly crowded, and consequently many of them must be small, and others become diseased. Here is matter for thought and experiment. D. S. C. *Madison, Wis.*

Chimney Cap—Smoking Prevented.

In the course of two or three months after we moved into our new house, at three differeut times when the wind blew directly from the north, it forced the smoke downwards so as to completely fill the kitchen, and one day we had to put out the fire and flee to another part of the house. This was a cold day, and the wind blew very strongly and steadily. We took the marble cap off the chimney, but this made no perceivable difference. There are mountains running north and south, both east and west of us, but it is an open valley north and south; consequently no hills to turn the current of air from a horizontal direction, and what seems strange, (inasmuch as the top of the chimney was lower than the ridge of the two story part,) is the fact that we were only troubled with smoke when the wind came directly from the north.



Mott's Chimney Cap.

I then went to work to find a rememedy, and adopted the "Mott plan," which I found in "THE CULTIVATOR" of December, 1845. The diameter of the perpendicular portion of tho cap is nine inches—the proportion of the other parts are nearly represented in the figure. That it might not rust, I had it made of galvanised sheet iron. It weighed 13¼ pounds, and cost at the shop $4.63 It has proved an effectual remedy up to this time, (about two years,) and is worth more to us, (if we could not get a substitute,) than the cost of a single copy of all the "Cultivator" since the commencement of its publication. D. G. WILLIAMS. *East Dorset, Vt.*

Suppurating Knobs on Cow's Jaw Cured.

In 1856 I had a half Durham heifer that had five knobs on her near jaw. They first appeared when she was two months off, and had so increased that the largest was as big as a man's fist, and down to the size of a large duck egg. They had now been enlarging about a year, and one of them had discharged and closed up alternately two or three times. An old farmer from Somersetshire, (England,) told me he had seen a cure in a similar case, by opening with the knife. I considered the matter, and after a few weeks tried it, cutting the knobs open so as to ensure a complete discharge of their contents. To secure a cleansing of the iuterior parts, so as to preclude suppuration again taking place by the infection of the sound parts by puss, was of the first importance. Having nothing better at hand, I selected wool, thinking its elasticity would help keep it in the cavities, and saturated it with spirits of turpentine, which I believed would be very likely to cauterize and cleanse the inside of the sores, filling each cavity as full as it would hold. The heifer got well, bred a good calf, and no knob has reappeared up to this time

When the bone is affected, and becomes enlarged and cellulated, the case becomes more difficult, and probably for such there is no certain cure. J. W. CLARK. *Wisconsin.*

Feeding Flax Seed, Oil Cake and Corn.

Messrs Tucker & Son—In the Country Gentleman of Jan. 6th, there is an inquiry, made by W. C. R., of Ill., of John Johnston or some of your correspondents, how flax seed may profitably be fed to stock instead of oil cake. I had hoped Mr. J. would answer this question, which he is so competent to do, and I therefore waited to hear from him. It is much more trouble, and requires more care to feed the seed than the meal; yet at a dollar per bushel, the seed is sufficiently cheap to pay the difference over the meal at present prices, which, in this section, ranges from $27 to $30 per ton. To feed seed the most economical way, is to boil it. To one bushel of seed there should be four or five bushels of water to commence with, and then it would have to be filled up several times, as one bushel of seed will make four bushels after it is boiled, if boiled as long as it should be to make every seed perfectly soft.

Soaking one or two days before boiling, saves much time in the boiling. It can then be mixed with any ground or mill feed that you choose to feed with it, or by grinding with other grain, it answers a good purpose as recommended by Mr. Talcott of Rome.

For milch cows I regard Linseed, in some shape, as almost indispensable, for a few weeks before and after the cow comes in, if she comes in before turned to grass; not that it is good to make her butter keep well, or give it a fine flavor while she is eating it, but for the reason it is so well adapted to her condition at that time, and is better than an insurance office for calves, while they are fed milk, and through the first winter, and equally good for sheep.

In Illinois I do not believe you can afford to use it in any way, where corn ranges from 30 to 40 cents per bushel, to fatten or winter cattle—what you term in the western States half fed stock, to turn to grass to ripen early for summer market, for a pound of corn meal will make as much beef as a pound of oil meal, or any other kind of meal you can feed. By the time your cattle reach the Washington drove yard, a bullock that carries 800 lbs. beef, York weight, will shrink at least 25 or 30 lbs. more that has been fed on oil meal than on corn. I say so, not for the reason that I have tried it, but for the reason that my cattle fed on oil meal when driven from my place to York, (before there were railroads,) a distance of 300 miles, would shrink about that much more than those fed on corn meal. The shrinkage of the oil meal fed cattle would be about the same as those fed on still slops. Again, oxen that are six years old and upwards, will make as many or more pounds on corn meal than on the same number of pounds of oil meal, while the two year old steer will not. The reason for this must be that their stomachs are not as strong, and cannot digest so much rich food, in proportion, as the full grown ox. The steer will not make more than fifteen or twenty pounds weight through the winter, on the same number of pounds of oil meal than on corn. If he had to be turned out for the reason he was only half fed, or did not ripen on full feed, or the prospect of a better market in June or July, then all that the steer fed on corn meal lacks in winter will be made up as soon as he runs to grass 30 or 40 days.

Corn meal not only fattens while you are feeding it, but unlike oil meal or roots, or anything else, it continues to fatten after you have stopped feeding it. When the bullock is turned to grass you can see it swell, and the scales will tell that he makes more flesh in the pasture than if fed on any other food. These tests were made with all the cattle, having as much good hay as they could eat; what they left was thrown out in the racks for the young stock. I endeavored to make the experiment with much care, after the price of oil meal advanced to about the same price per ton with that of corn; when I first began to purchase, it was as low as seven, eight, ten and fifteen dollars per ton. I have used large quantities of it for many years, and could I purchase it at its relative worth compared with beef for fattening, I should always use my feed mixed with a liberal portion of the oil meal, as there is no danger of cloying; and the manure is worth more than that made from anything else I have tried, especially for corn, grass and wheat, and perhaps for all crops except potatoes, which are more apt to rot since the blight made its appearance, than with any other manure; all kinds are more or less dangerous since that time.

For working cattle or horses, a small quantity is good. It should be small, as it does not give much strength or power of endurance, compared with oats, which feed the muscles.

I have said that I made the experiments with much care. It was for my own benefit, without ever expecting to give publicity to them at the time, or I should have preserved the record of the whole transaction, which is either lost or mislaid. It was for two successive winters with forty head—twenty head in a stable on one side of a large mow of hay and the same on the other. I fed hay from the same mow, turned in the same yard through the day, and they drank the water from the same trough. Those that were stabled on the north side of the barn made 16 or 18 lbs. more each, than those in the south stable, which was equally warm except from the northern exposure. The oil meal was fed on the south side one winter, and on the north the next. I can only account for the cattle doing better on the coldest side, from not having their windows left open in warm nights, at all times, as they should have been. Stables can be too warm for cattle as well as too cold. Nature has provided them with warm covering, and if kept dry and protected from the wind, it is all that is necessary, and then in warm nights they are better off in a good yard with plenty of straw to lie on. I weighed the cattle myself; they were fed by what I regarded a faithful hired man, and I have become satisfied from forty years experience, that I cannot afford to purchase oil meal at present prices to fatten cattle, or to husk corn and send it to mill and give a tenth for grinding to feed cattle, and that there is not one-tenth lost, by feeding the corn whole to the cattle; the hens, turkeys, ducks and geese, will find nearly all of that. Cut the corn, bind it up in sheaves, and set it up well; when cured sufficiently, house it, if room; if not, stack it well and feed as you choose. In the western States hogs follow the cattle, which is the better way, when large quantities are fed.

Our corn costs too much labor to make a business of fattening on that, and I can only afford my cattle a start on corn or something else, and fatten on grass. One bushel of corn fed in the spring before going to grass is worth two fed in the fall. The reason is that corn is so strong and rich in its fattening properties, that it fills up the crevices or pores of the flesh of the bullock with tallow, a portion of which seems, in a measure, to lie dormant when fed on other dry food, until it is developed on grass.

I am not prepared to say exactly how much boiled linseed should be mixed with corn meal for fattening; the quantity, however, much less than with mill feed, but should always be mixed. The oil meal can be safely fed without. A. B. Dickinson. *Hornby.*

* * *

Singular.—A neighbor of mine has a cow very singularly affected. When she goes to drink, instead of supping the water, she "*laps*" it, as a dog does. The cow is in good health in every other respect; eats heartily, and is giving milk. Can you, or some of your readers, tell us of a cure for it? R. B. C. *Chattanooga, Tenn.*

Thoughts about Oxen.

Oxen, from their docility, were probably the first of domestic animals which gave their strength to the service of man. Ancient writers frequently speak of them, and King Solomon, among his pithy proverbs, declared, "Where no oxen are, the crib is clean, but much increase is by strength of the ox." The Hebrew husbandman had made some advancement in agriculture, as they used plows and carts, and "the strength of the ox" to draw them. It seems strange, however, that having arrived at this point, they should go no farther, but that the farmers of the fertile valleys of Canaan should follow the same routine to-day which they did five thousand years ago.

It is as true now as in the days of the wise king, that "much increase is by the ox." Taken literally as a working animal, and also as included when we speak of cattle, there is no profitable agriculture without them. Stock and grain-growing are inseparably connected in most soils and climates. Wherever cultivation is required, wherever manure is useful, there his "crib is clean" who keeps no stock, to assist in the cultivation of the soil, to consume its coarser products, and to furnish manure to keep its fertility unimpaired. To grow breadstuffs profitably, we must also raise meat—and so it has been from the beginning.

As to farm teams, the points in which oxen differ from horses, scarcely admit of close comparison. The ox serves the farmer by his labor, and profits him by his growth. The horse, as an idler, is useless to his owner, but the ox is increasing in value by the feed and rest he takes, as those prepare him for the butcher's stall. For work to which he is adapted, the ox is the best, as he is the least expensive team; but for speed—for *all uses*—horses will ever be preferred.

It has been questioned at what age it is most profitable to cease working oxen, to fatten them for beef. Some would not go above six years—contending that previous to that age, they can be most readily and profitably fattened—and that at seven years or older, they require much longer feeding to fit them for beef, more than enough to balance the additional labor performed. The general opinion places this period at eight or nine years, giving the prime of life to work, and when they begin to fail for this, using them for beef. What say our readers on this?

Notes about Potatoes.

I notice many accounts of the yield and quality of a new variety of potato, called the *Prince Albert*. Can you inform us where it originated, or if it has a synonyme? I sent to Mr. G. HOWATT last spring for some of them, but was unable to obtain any. Since, from the best information I can obtain, I am led to believe they are the old *St. Helena* under a new name. The *St. Helena* is a second rate potato, quite good for baking till towards spring, when they become *watery*, though when grown on sandy soil they are better. I have bought them in the Boston market under the following names, though convinced at the time they were St. Helenas: East Port White Mountain Seedling, and Wild Mexican. They yield very well; will bear *manure without rotting*; are worth sixty cents per bushel in Worcester market.

The *Davis Seedling* originated in Sterling, Mass., some six or seven years since. For several years it was free from rot. Mr. Davis secured a gold medal valued at $50, from the Worcester Horticultural Society for his potato. I have planted them five years—the first two not a decayed potato could be found among them; but for the last three one-half to two-thirds have rotted. In quality they far excell the St. Helena, and are second only to the Carter, while they yield abundantly. Hundreds of bushels of *Peach Blows*, (which are almost worthless *here*,) and *Western Reds*, have been sold in Boston market for Davis' Seedling, so that many have condemned them without having ever tried them. They are now selling at 60 cents per bushel in Worcester market.

I procured from Mr. GOODRICH of Utica, last spring, several new varieties of potatoes, which bid fair to be of great value. Among the best is the *Garnet Chili*.

I have written these things because I take a deep interest in the cultivation of the potato, and endeavor to procure all valuable new varieties. One feels rather "cheap," after paying double price for a *choice* kind and $1 to $3 for express, to find an old sort long since discarded

Is the *Chenango* and *Mercer* the same? C. W. G. *Holden, Mass.*

We first received the Prince Albert Potato from Mr. HOWATT of Newton, N. J., who informed us that he bought them in New-York under that name. About the same time, we received them from Mr. GEO. McMAHON of New-Milford, Conn., under the name of Napoleon or Prince Albert. Since, we have received several different kinds, which are claimed to be Prince Alberts, which are not the same as those received from Messrs. Howatt and McMahon. The only St. Helena potatoes we have seen, were from Tompkins county in this State, and our first impression was that they were identical with the Prince Albert, but on a more careful examination we came to the conclusion that they were different varieties. The Chenango and Mercer, we believe are identical.

Turf Ashes—Bone Manure.

EDS. CULT. & CO. GENT.—I was pleased to see your invitation for *inquiries* on all matters relating to farming. I have often wished to ask for information, but feared the many letters of inquiry you must receive, might be annoying. I have never seen fully described the method of preparing *Turf Ashes*.

1. Will any old turf, such as is usually found by the roadside, answer for burning? (1.)

2. At what season of the year should it be cut? (2.)

3. Will a common plow do the work where the soil is somewhat hard and strong? and 4th, What depth of furrow? (3.)

5. Should the turf be turned or moved in any way to dry them more completely before burning? (4.)

6. Would patches of brakes and sweet fern be proper for this purpose? (5.)

7. What quantity of ashes should be given to an acre? (6.)

Is there any cheap and practicable way of preparing *bones* as food for crops where there is no mill for grinding? (7.) I saw it stated that if they were placed in heating horse manure, they would in the course of the winter become soft, and I did as directed, but the bones in the spring were as hard as ever. INQUIRER.

(1.) It will; and the older and more compact the grass roots, the better the turf will burn.—(2.) This is not important; probably early in summer, that the turf may be well dried by the commencement of autumn, when, if the weather is dry, the burning may be performed.—(3.) A plow, if sharp, will do the work, but it should not be run down more than about three inches, or lower than the stratum of dense grass roots.—(4.) It should be set on edge, or built in loose heaps. Sometimes it may be necessary to place alternate layers of brush, weeds, &c. These in sufficient quantity, will cause clay or loam to become burnt, if dry enough.—(5.) Fern might be burned with the heap.—(6.) This would vary with circumstances—if much vegetable matter were burned, producing much ashes, an amount equal in extent to the removed layer of turf, would do. On heavy soils, with less vegetable ashes, a larger quantity would be beneficial.

(7.) We know of no mode, combining cheapness with efficiency.

Wheat and Chess.

D. Wyrick furnishes us a long account of a crop of wheat which was destroyed by the fly, and a large crop of chess took its place—he supposes the seed and land to have been nearly clean. He wishes us to inform him "where the seed of the chess came from? An answer is demanded."

In reply, we wish it first to be distinctly understood, that we do *not* propose to inform every farmer throughout a widely extended country, where all the seeds of every weed come from that is found growing in every field — nothing less than omniscience could do this, and it is simply absurd to ask the question. We will ask our correspondent a much simpler one, which will puzzle him to answer: In passing a field one evening we saw in it three cows; the next morning the same field was observed to have no cows, but three sheep—the question is, where those sheep came from? He can say that they *might* have found their way there in many ways, without resorting to a transmutation of cows to sheep, but that is not answering the question. So we could inform him how the seed of the chess *might* have been sown, but this is not what he asks. We have often met with quite as extraordinary instances as this which he mentions, and more so, where, knowing the circumstances, we could easily account for the source of the seeds of this weed; but in the present case, we have not the benefit of personal observation.

He admits the land had *some* chess before, and that there might have been accidentally a few grains of chess in the seed wheat. We have made observations on the character of the chess plant, and found it to increase *three thousand fold* in a single season, that is, one seed would give three thousand the first year, nine million the second, twenty-seven thousand million the third, eighty-one billion the fourth, two hundred and forty-three thousand billion the fifth year, which would be eighty-one thousand million bushels, at fifty thousand grains to a bushel—enough to seed every improved acre in the United States, at the rate of one peck per acre, *twenty thousand times!* This is the increase that *might* take place under the most favorable circumstances—and when it is remembered, as we have often observed, that chess will grow and perfect its seed in stubble and even in new meadows, wholly unperceived, it is easy to understand how the soil may become impregnated with the seed, independently of the various other ways in which it might be scattered.

When the wheat grows luxuriantly, the chess plants are small and unperceived; when it is killed, they spring up and yield a thousand fold. We have observed very dense crops of chess, each plant spreading out so much when full room was given it, that a fair acreable product has been yielded from an amount of seed not greater than what we have found in some seed wheat said to be "perfectly clean," without resorting to any supposed increase, or previously impregnated soil.

Our correspondent says, "you now have the entire culture of the field [alluded to] by one of the most careful men the world could produce." Yet he admits there was *some* chess both on the land in the seed; we have known a number of farmers who were so much *more* careful, that they had not only no chess on their land, but their seed had none, as was proved by the fact, that *no wheat ever changed to chess on their lands*, whether winter-killed or not.

Protection from Rats.

Eds. Co. Gent.—I have noticed that our friend A. G. E. of Cardington, O., wishes to know of "some good way to destroy or drive away rats," and furthermore that he does not manifest "any regard for their feelings." Now I suppose when he sees the poor fellows fleeing for safety, he could hardly in truth adopt the language of the poet Burns, on turning out a poor mouse with his plow, as it scampered off:

> "I'm truly sorry man's dominion
> Has broken Nature's social union,
> An' justifies that ill opinion,
> Which makes thee startle
> At me, thy poor earth-born companion,
> An' fellow mortal!"

"As regards destroying or driving away," I have but little to say; but would say to all who are not satisfied with harboring them, that after considerable experience, I have come to the conclusion there would be much less cause of complaint, provided they were not allowed such ample accommodations in the matter of cellar-room. We know it is easier to keep out bad tenants than to oust them. Years ago, when I came into possession of the old homestead, a portion of the cellar had a brick pavement, and a portion was earthen floor; there was also some holes in the walls as well as under them. To the former I applied mortar freely, and then plugged them up with stones, after which the whole floor was covered over with mortar some three inches deep, which was carefully pounded down as it dried, to avoid having cracks when completely hard. During the process I frequently had fresh made holes to plug up, but I kept up the warfare, and finally succeeded in obtaining exclusive possession. Since then I have had full belief in the saying that "one ounce of prevention is worth more than a pound of cure."

In 1849, when I commenced building at Highland Home, the first was a barn, which we had scarcely roofed in, when a dog discovered a large rat under the wall of entry sills. So the building was tenanted before there were any provisions in it. I then concluded that I would not accommodate such tenants with cellar-room, and straightway with pick and shovel dug a trench the width of shovel, and about eighteen inches deep, on both sides of the foundation walls, into which I pounded down (with a hammer for the purpose,) small stones, to within about three inches of the surface, and then covered them with earth; the consequence is, that we are very little troubled with rats since.

I am aware how difficult it would be for many who have ample accommodations, and have them *already occupied*, to get rid of them; but I would advise all who can, to debar them the privilege of *cellar-room* as much as possible. Now I am fully persuaded if my having thus much "investigated" the "subject" as our friend recommends, should induce others to plug up their cellar walls and lay mortar floors, they will be amply recompensed for their trouble. J. Cope, *West Chester*, 28*th of* 1*st*.*mo.*, 1859.

Japan Apple Pie Melon.

Messrs. Editors—Enclosed I send you a package of the seed of this celebrated melon, which I hope you will give a fair trial the coming season. They are a Japanese melon, brought there by Com. Perry. When grown to perfection, they often weigh from 35 to 40 pounds—are of a cylindrical form, and when perfectly matured are of a light golden color, with fine, firm grained flesh. When cooked they are almost tasteless, but by the aid of lemon juice and sugar, an excellent pie can be made. For preserves we say they have no equal. If kept in a dry, cool cellar, where they will not freeze, they will keep through winter. Should any of the subscribers of the Co. Gent. or Cultivator, wish any of these seeds, I will exchange with them for any varieties of seeds they may have and think worthy of cultivation. I have none of these seeds to sell, but should any desire them without exchanging, I will send a package on receipt of six cents in stamps to pay postage and the expense of putting up and mailing. Willson J. Rallston. *Georgetown*, *Brown Co.*, *Ohio.*

Clover Seed on Prairie Sod.

W. Phelps of Crete, Ill., writes the *Prairie Farmer:* "Two years ago last spring, I sowed a quantity of clover seed in the chaff, on some prairie sod It being a season of drouth, but little came up that year. The next year it came up thick, and is now good pasture." This adds another fact in regard to those recently given (Co. Gent. Nov. 4, '58,) on seeding unbroken prairie to the cultivated grasses.

The same Land Fruitful and Unfruitful.

[We are indebted to a friend for a translation of this and another letter from Mr. Schmidt, which came to us in the German language.]

Eds. Co. Gent.—Some years ago the Prussian government undertook to reclaim by irrigation, a large part of the Teufler heath. The heath contained more than 100,000 acres of sandy land, so sterile that it was not possible to cover it even with a growth of pines. The river water used for irrigating it, was conducted about ten miles through a canal, and it required six weeks after the channel was opened, before the porous soil along its banks became so saturated that the water reached its proper destination. Several years elapsed before the hitherto so barren soil could sustain a tolerable growth of grass; nevertheless, in time it was fully shown that even there much grass could be produced from sand and water.

As the soil adjoining the canal became saturated with water, the farmers living within a certain distance began to complain that their lands were turning to marsh, and they received indemnification from the government. However, instead of losing their crops, the next season gave them a better harvest than ever before. and in a few years they were able to grow good barley, where hitherto only poor crops of oats had been obtained.

For the experienced, reflecting, intelligent agriculturist, an accurately executed chemical analysis of his soil has great value; but to him who imagines he can make an easy chair of it, it can be of no use. E. Schmidt. *High Place, Henry Co., Ill.*

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Culture of Indian Corn.

Messrs. Editors—At your solicitation, I now proceed to give your readers my experience and views in corn raising, after a trial of different modes for over thirty years in the cultivation of this cereal.

The best soil for Indian Corn, is, I think, everything considered, a gravelly loam. Though almost any other kind of good soil, if properly managed, will produce good crops of corn. My practice has been, if the ground was in grass, to manure well with long stable manure; turn it under a few days before the time of planting with a furrow about six inches deep, and afterwards make the surface fine and mellow by frequent harrowing. Then, if I design to plant by hand, I mark off the ground for the rows at the distance of three and a half feet from each other, and plant with hoes, using a handful of compost to each hill, composed of one part hen manure and three parts fine muck or loam, well incorporated and made fine before being applied.

This compost gives the young rootlets a start and keeps them growing finely until they reach the manure below. I prefer to plant with "Emery's Corn Planter," when the land is in a good mellow condition. Its advantages are—it saves a great deal of hand labor in planting. The rows are straighter and can be worked closer than with the cultivator. The number of stalks can be better regulated to a given space, and the yield is considerably greater to the acre.

When the condition of the land has permitted, I have practiced "ridging up" my corn ground. having previously manured the land and plowed it deeply—by which means the soil is put in fine tilth and the manure well mixed. The planting is done very expeditiously; the crop is not as subject to injury from wet weather. In short, the best piece of corn I saw the past season was "ridged up;" but without manure of any kind.

As regards the time of planting, a great deal depends upon the season—but as it opens sometimes earlier and and sometimes later, and as nothing can be told of the future concerning the weather with any degree of certainty, I have always found it the best plan to defer planting till the weather has become settled, and the ground warm enough to bring the corn up quickly, I once knew a piece of corn planted so early that it became stunted by cold wet weather, and did not recover during the whole season, and failed almost entirely.

My time of planting is from the 20th of May to the first of June, subject to variations by state of weather, &c. After a two years' trial with the King Philip corn, I have no hesitation in saying that, "in my estimation," it is the variety best adapted to this section of country, as it has not only proved the earliest, but yields the most sound corn of any kind with which I am acquainted, if properly planted. It should be planted three and a half feet apart in the rows, with the hills eighteen or twenty inches from each other with five or six kernels in a hill. C. *Niagara Co., N. Y.*

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Sugar-Cane Molasses and Mills.

Messrs. Editors—As I have not seen much in your valuable paper about the Chinese Sugar Cane of late, I thought I would let you know how we are getting along in South Jersey, in the manufacturing of molasses from the cane in a small and cheap way. In 1857, I made a few gallons of inferior quality, owing to my boilers being cast-iron, but I determined to try it again; I accordingly purchased a second-hand mill, with three iron rollers on a wooden frame, for $60; two flat bottom tin pans, three feet long by two feet wide, and ten inches deep, for $3 each; then built a cheap brick furnace to suit, costing $3 more—making in all $69. On the 11th of October, in 1858, I commenced operation with a boy and a horse, and manufactured 25 gallons of excellent molasses per day, burning one-eighth cord of pine wood. In this way I have made during the past season, over 900 gallons of superior molasses. I do believe the time is not far distant, when every farmer will raise his own sweetening, as well as he does his own bread and pork; and thus, in the aggregate, save a large amount of money to our country that would otherwise be sent abroad. This can be done, and very cheaply to, for one man can attend to three or four boilers, and with one of Myer's improved mills, which from appearances will surpass anything of the kind now in use. two men can manufacture 80 to 100 gallons of molasses per day. This machine has other merits also, which will be likely to bring it into general notice. Thomas H. Miller.

Since writing the above, I noticed an inquiry in the Country Gentleman by a correspondent, who asks which is the best mill for pressing sorghum or sugar-cane. I have often thought I would give you some of my experience in the matter, and perhaps save a great deal of trouble and unnecessary expense to many who will undertake the business. I have tried several mills, and have seen several engravings in different papers—nearly all are deficient in one or two points, that is, in the gearing, or in the frame, or in both. None but those who have tried the machine thoroughly, can form any idea of the pressure or strength required. Even Meyer's patent mill, the queen of all sugar-cane mills, had a weak place; this, however, is remedied by the improvement he has made in the frame. This machine, as far as my experience goes, is the best and cheapest. It will press the cane as well, if not better, than any other machine; it will cut cornstalks, sugar cane, hay and straw, equal to any fodder cutter ever invented; so one machine answers two important purposes, as much so as the combined mower and reaper. It is the only horizontal mill that is properly geared for hand or horse power.
T. H. M.

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The Turnip Culture.

In the Co. Gent. of the 16th Dec., 1858, your correspondent, L. Bartlett, gives his experience of turnip culture. Although not bred a farmer, inclination towards the pursuit and its refreshing and health yielding tendencies, have created for me considerable enthusiasm in that direction, and I have oftentimes regretted that I could not give strict personal attention to experiments which from time to time have presented themselves as worthy of trial. Without further preface, I wish to say that we have raised the Fetercairn Swede, Laing's Garden Swede, the Yellow Malta, the White Stone, Dale's Hybrid, the Red Top White, the Yellow Aberdeen, White Globe, the Yellow Swede, Yellow Altringham, and the large English Norfolk, as well as other varieties of turnips, all from good English seeds. Some of these, indeed all, are beautiful turnips. Some of them were, from their size, curiosities here, weighing from 15 to 18 pounds. Much benefit was derived from testing all these varieties, but the practical results were summed up in selecting a good Swede, say the Purple Top and the White Globe, described in Stephens' Book of the Farm. The White Globe matures early, and is distinguished for its "sweetness, juiciness, size of root, weight of crop, and elegance of form," and is the first to be used—the Swedes being the reserve stock, firm of texture and good keepers. A farmer may well confine himself to two such varieties, though he will find some of the others, as the Green Top Aberdeen Yellow, of great value.

We tried them on a variety of soils, and have had no difficulty in securing a good crop. Careful preparation of the ground is a pre-requisite in this as in every other successful crop to censure certainty. Our practice has been to have the land ready, the drills prepared, and sow (the Swedes early) just before a rain shower. When it can be had, superphosphate of lime, strewed lightly and covered in with the drill, will give the plant such a vigorous start as to place it out of the reach of danger from its insect enemies.

For immediate use, a supply of turnips should always be stored in the barn cellar. One year in particular, having a quantity of Swedes for which we had not cellar room, a dry place, conveniently situated near the farm house, was selected—the earth thrown out about one foot deep with drainage from the lower end, and the turnips piled up in a ridge shape, six or seven feet wide at the base, and lengthwise running from south to north. About ten or twelve inches of straw was laid loosely over the heap and at first a light covering of earth put over the straw and smoothed down with the spade. At the approach of more extreme weather the covering of earth was increased to, say six or eight inches, and vent-holes, filled in with sheaves of straw, were inserted. Our confidence was well repaid, for in the spring the turnips were as fresh and sweet as when they came out of the ground. Care, however, should be taken in our northern climate to do the work well, and all unsound roots should be picked out. I will not venture to *recommend* this plan, as I do not wish to incur, even remotely, the responsibility of any of your readers losing a valuable crop—all I mean to say is, that we practiced it ourselves and such was the result. W. O. **Buell.** *Perth, Lanark Co., C W.*

Profit on Milk and Butter.

There are probably several of our readers to whom this question comes up for decision every year, or at least every now and then, and as it is one of not a little importance, pecuniarily and otherwise, it has occurred to us that the following facts may prove of service in enabling those in doubt about this matter to arrive at a correct answer. We give them as we find them in an article in the *New England Farmer* of Feb. 5, under the head of "A Comparative Statement of the Product and Value of Milk and Butter," by **George S. Boutwell.** Mr. B. states that he commenced saving milk for butter on the 10th of May last, and continued until Oct. 1st. "The milk was weighed once a week, and twenty pounds were considered equal to one can of eight quarts. The milk would have sold for eighteen cents a can, and the butter was sold for twenty-four cents a pound." The result and comparative value at the above rates may be seen from the following statement:—

Milk.		*Butter.*	
May, 163 cans,......	$29.34	177½ pounds,........	$42 60
June, 241½ do.	43.47	201½ do	48.36
July, 188½ do	33.93	166¾ do	40.02
Aug., 211½ do	38.07	193¾ do	46.50
Sept., 202½ do	36.45	174¾ do	41.94
	$181.26		$219 42
Cost of making 914¼ lbs butter at 5½c...	50.28	Value of residue of 1007 cans at 8c.,..	80.50
	$231.54		$299.98
			231 54
		Difference in favor of Butter.............	$68.44

The foregoing statement furnishes, incidentally, an answer to a question which has received, as it necessarily must do from a great existing variety in the richness of milk, quite a variety of answers. Taking the entire season together it will be seen that 22 pounds, (which may be readily converted into quarts or gallons, of either wine or ale measure, by the process indicated on page 49, of current volume of *Co. Gent.*,) produce a pound of butter; but in the month of May only 18.3 pounds were required.

In applying the results obtained by Mr. Boutwell to any particular case allowance must be made for the prices which can be obtained, in different cases and different localities, for milk and butter. In most cases they will vary more or less from those which he has made the basis of his estimate.

In connection with the matter now under consideration, and with what was said on page 49 of current volume of *Co. Gent.* as to the Oakes Cow and the weight of Milk, we would here remark that there is a want of accuracy or liability to error from the employment of two different measures in milk accounts. The milkmen of Boston *buy* from the farmers by beer or ale measure, and sell by wine measure; and sometimes the one and sometimes the other is made use of in milk accounts. From this, errors and confusion must arise, as the former contains 282 cubic inches, while the latter contains only 231, per gallon.

To Make Money with Poultry.

I see so many discussions about the profits of poultry in your paper, that it induces me to suggest the following, which, if faithfully put in practice, will give the desired results—viz., large profits.

The object is to have hens that will lay an egg a day every day of the year. Thus, if you begin with 300 hens, they must lay 300 eggs, or 25 dozen a day, or 9,125 dozen a year, which at 20 cents per dozen, will be $1,825 cash a year; the expenses on this will be about $500.

If a man has five or six acres of land, he can begin with 1,000 hens and about 80 or 100 roosters. He will have to enclose his land with board fences five or six feet high; make the hen-houses along that fence—seven or eight feet wide, eight or nine feet high in front, with doors and windows every fifteen or twenty feet—one or two roosting poles along the whole length back, so as to give every bird one foot square at least to roost—the nests can be put under the windows or back part of the house; there will be then sufficient space in the middle for a storm and feeding room to put them in stormy weather—the house in such weather being well supplied with clear water, and ashes, lime and sand, for the hens to roll and dust themselves in.

The interior of the six acres will have to be divided in several divisions, which can be done with lath fences, so as to keep the poultry in as many distinct groups as possible. They will naturally roost in the house, the groups by themselves also, although it may be partitioned off for that purpose, and also well supplied with clear water every day, lime, ashes and sand.

The way to make them lay every day, is to feed them on nothing but cut raw meat, which may be of any kind—horse or dog, or any other meat, worms, grubs, caterpillars, or offal meat. They will then lay every day certain. No hens should be allowed to set. Any eggs that want to be hatched, should be hatched by artificial means, (an eccalobeon,) so as not to disturb the hens from laying.

In the choice of poultry, discard all except good barnyard fowls—Dominiques, Dorkings and Spanish will do very well, and the common dung-hill fowl. These will prove uninterupted good layers.

As above, a man with 1,000 hens will get 30,416⅔ dozens of eggs a year, worth at 20 cents per dozen, $6,083.31; but in winter eggs will sometimes sell for one-third to one-half more, and often double the price in summer.

Twenty to twenty-five acres will be sufficient to keep 100,000 hens; but then room should be had elsewhere to prepare the meat, the expense of which would be high, but the income would be large—almost fabulous, however true and certain.

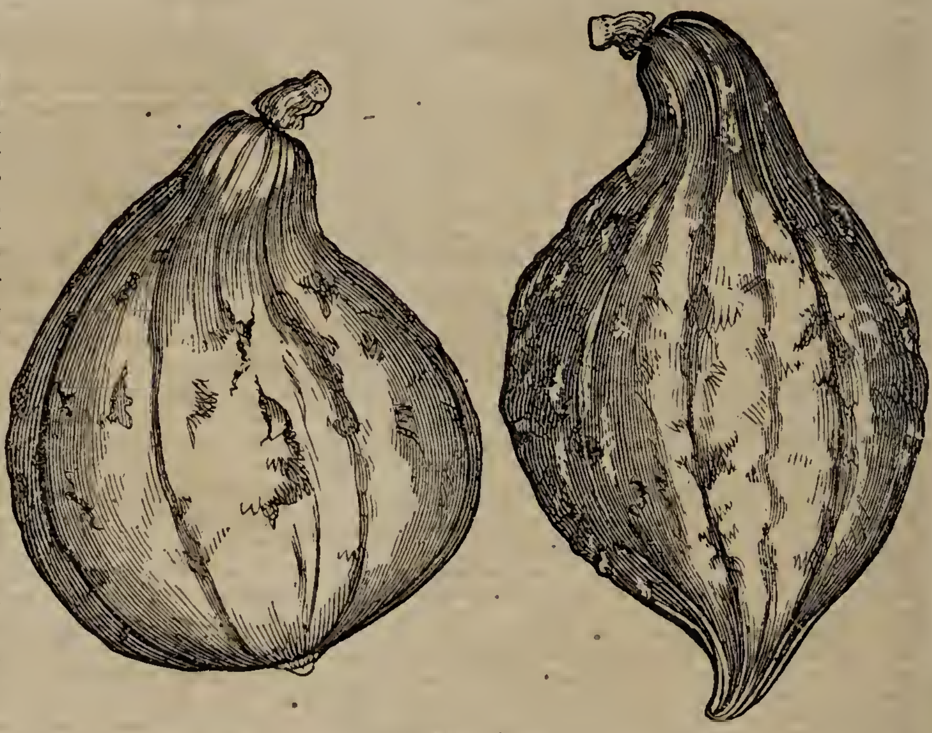
Properly to estimate the expenses of feeding, will depend on how the meat can be procured. Near a large city it will be less than elsewhere, owing to the better supply of dead horses, so that in a measure, the greater the number of hens, the less the meat will cost; for there any number of dead horses and dogs can be got, and even particularly a profit can be made on the dead horses, so that the meat would cost almost and in many cases nothing; for the hides, the blood, the heads, hoofs and bones, can be disposed of; the glue and Prussian blue manufacturers will buy the heads, hoofs and joints; the tanners will buy the hide; the button makers will buy the large bones; cutlers will buy the small and flat bones for handles, or the rest of the bones can be sold to bone dust makers for manure, &c., &c., or the gluten can be boiled and made into gelatine. Any quantity of meat can be prepared by chopping it fine, packing it in barrels with salt and pepper, and kept in a temperature a little above freezing, all the year round.

The hens eat the meat greedily, and thrive uncommonly on it. Any one can thus graduate the income he is desirous to realize from any given number of hens.

No hens should be kept over four years. All at that age should be fed entirely on grain for three weeks, and then sold off. F. A. **Nauts.** *Philadelphia, Pa.*

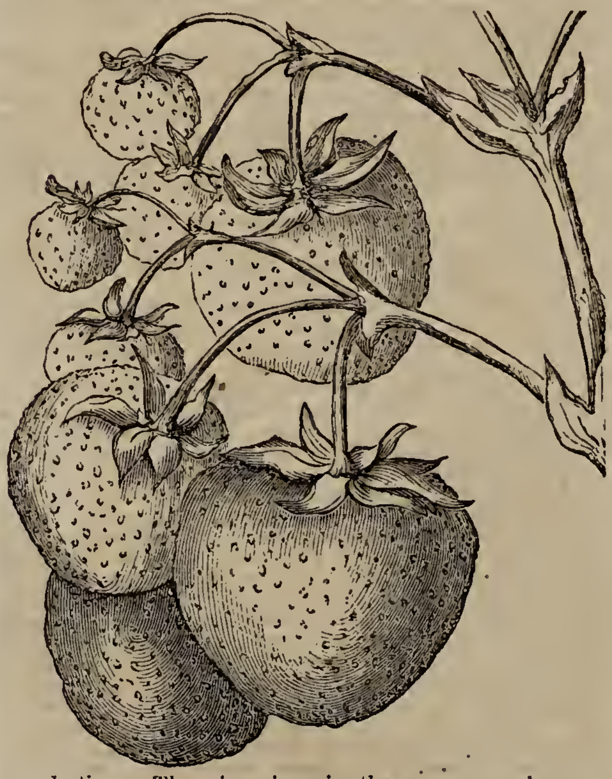
Hubbard Squash.

The above engravings are good representations of this celebrated squash, which has attracted so much attention during the last two or three years. Mr. Gregory, to whom the public are indebted for its general introduction, says it was introduced into Marblehead, Mass., more than forty years since, and that during this long period it has so maintained its character, that it is the opinion of a person now living, who ate the first squash brought into that town, that the quality is fully as good now as when first introduced. It has a thick, hard shell—flesh usually of a deep orange color, and of first-rate quality, fine grained, compact and dry. It keeps well until spring.



THE HUBBARD SQUASH.

Hooker's Seedling Strawberry.—Do you know anything of the "Hooker Strawberry" advertised in your paper, and is it what it is represented? N. J. B W. *Tappahannoc, Va.* [The Hooker Seedling is a strawberry of superior quality, uniformly a great bearer, and ranks among the best for home consumption; but is said not to be sufficiently firm fleshed for distant marketing. The size given in the accompanying engraving is the result of exact measurement of the fruit as grown in Western New-York with ordinary cultivation. Unusual care would doubtless afford larger berries.]



Fertilizers.—Burnt leather makes a very powerful manure. All manure, as a general rule, should be be moistened every other day by its own drainings, and always sheltered from the weather. H. L.

The Hydraulic Ram.

EXPENSE OF CARRYING WATER THREE QUARTERS OF A MILE.

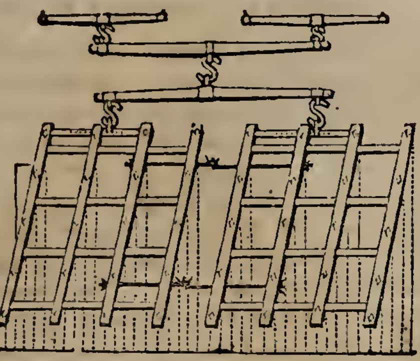
Messrs. Tucker & Son—My father is anxious to bring into town, the water from a spring three-quarters of a mile distant. The pipe would have to pass over hills and hollows, and the water must be raised about 100 feet. The spring is a very strong one, running at least 50 or 60 gallons per minute throughout the year, and a fall of 10 feet could be obtained by carrying the water a few hundred feet. Would a hydraulic ram be the best way to raise the water, and could it be depended upon, or would it be liable to get out of order? What proportion of the water can be raised? Are *hydraulic rams* much used and do they generally give satisfaction? H. W. W. *Jonesboro, Union Co., Ill.*

Answer.—We have seen a number of Rams in operation for carrying water to distances less than required by our correspondent, and we have heard very little complaint in any case, of any difficulty or dissatisfaction with their operation. And, on consulting Messrs. Emery Brothers of this city, as to the cost in the instance under consideration, they give us to understand that they would not hesitate to warrant entire success to any customer of theirs in circumstances similar to those of our correspondent.

As to expense, the first item is the cost of the Ram. No. 6 would best answer the purpose, which is sold for $30, and which by the use of a three-quarter inch iron pipe, would probably deliver at the least estimate full 50 to 60 gallons per hour. Eighty feet of two inch driving pipe would be required, which sells for 75 cents per foot, and 3,840 feet of three-quarter inch pipe—price 13 cents—making a total of $559. Deduct for cash 15 per cent, and the balance, together with the price of the ram, makes the total cost $505.15. If a less amount of water would answer the purpose, one-half-inch pipe, (10½ cents per foot,) could be used, reducing the net cost to $423.72.

We know of no other or cheaper way of carrying the water to the desired height and distance, so likely to be effective and durable.

☞ N. L. Chaffee, Esq., Jefferson, Ashtabula Co., O., recently purchased of Jas. O. Sheldon, Esq., of Geneva, the bull "Clarendon," red, bred by Jonas Webb of Babraham, England, and imported in fall of 1857 by Wm. Betts & Co., New-York.



Scotch Harrow.

Messrs. Editors—Could you give a description of the Scotch Harrow, form, size, weight, &c. Owasco.

The following figure represents the usual form of the Scotch Harrow. In this form of construction, the bars are about two inches and three-fourths square, or if of the best timber, two and a half will do—and about four feet and a half long. It contains about forty teeth, each when first made about a foot long, and three-fourths of an inch square, the four lower inches tapering to a point. They are driven but partly through, and as they wear shorter, they are successively driven further. If the wood work is made of tough elm, at a specific gravity of seven-tenths, it will weigh about 70 to 80 pounds; the forty teeth will weigh about 65 or 70 pounds; total weight of harrow, 135 to 150 pounds.

The modification of this harrow, usually constructed in this country, consists of only six instead of eight timber bars, which are three inches square, and four feet nine inches long, containing 32 teeth nearly three-fourths of an inch square, and the whole weight being a trifle more than we have stated. This form renders it somewhat stronger and better adapted to rough stoney ground, but it is not so efficient in pulverizing. The team is usually attached by means of a clevis to one of the central bars, which is made a few inches longer for this purpose.

We have seen still another form of the Scotch harrow, intended only for land nearly or quite free from stones; it was made of very tough timber only two inches square, with teeth scarcely three-quarters of an inch square, and 48 in number. It pulverized the land to which it was adapted so as to appear like an onion bed.

Summer Bouquets.

With a few flowers we can add very much to the beauty of the garden, and the cheerfulness of the house. First and foremost for this purpose I esteem the Verbena. There are so many different shades of color, that a very pretty bouquet can be made of them alone—though of course much prettier with the addition of a little Mignonette and Rose Geranium.

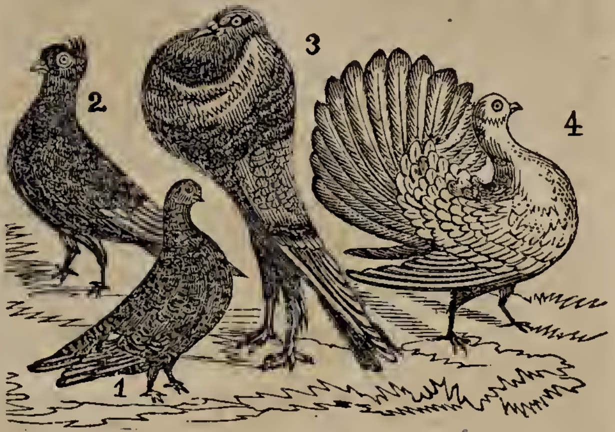
Let us get, then, if we can, one dozen plants, and they will more than repay us for all the care we take of them. If the plants cannot be obtained, then and only then, get one or two packets of Verbena seeds. As they bloom, reserve only the best, and in August select a very few of the very best; plant them in pots or boxes; leave them in the open air as long as it can be safely done, and move to the house on approach of winter. They can be kept in the house very easily—for, when well rooted in August, they will withstand considerable frost.

Besides Verbenas for summer bouquets, procure one packet of seed of each of the following, viz: "Ageratum Mexicanum," "Sweet Alyssum," "Cacalia," scarlet and yellow, (2 varieties,) "Candytuft," white, purple and crimson, (3 varieties, "China Pink," "Gilia," *finest mixed*, "Mignonette," "Phlox Drummondii," finest mixed, "Sweet Pea."

There are several very beautiful varieties of Phlox Drummondii, which can be obtained in separate packets. All of the above can be purchased for a few shillings of B. K. Bliss, of Springfield Mass., or of Wm Thorburn, Albany, or J. M. Thorburn & Co., New-York, or of other seedsmen.

Fancy Pigeons.

The leading varieties of Fancy Pigeons, are the following, viz: Tumbler, Barbary, Pouter, Fantail, Trumpeter, Nun Morehead, Carrier, Jacobine, Turbit, Swallow, Spot, Magpie, Runt, Star, Archangel, and Horseman.



1. Tumbler—2. Barbary—3. Pouter—4. Fantail.

No. 1. Tumbler.—This variety is one of the smallest, prettiest, and most peculiar in its flight, of any in the whole domestic pigeon family. It derives its name from its distinctive peculiarity, which is a faculty of "tumbling" when flying. When first mounting into the air for recreation, as well as when near lighting, it performs a succession of "somersets," throwing itself over and over backwards and forwards, in a manner so unlike any other bird of flight, as to make itself observed and admired wherever it is known.

The head should be nearly round, with a projecting forehead, and full cheeks. The bill should be nearly straight, very short, small and pointed. The eye should be near the center of the head, or a little below and back of the center; it should be full, round, bright and prominent, having a silvery or pearl-white iris. The neck of medium length, slender and much curved. Breast quite prominent. Back short, with quite a round compact body. Legs very short, with small, neat and clean feet and toes. Wings, close to the body, with flight-feathers and tail quite short.

Tumblers are commonly of some white color, as buff, cinnamon, brown, and black, while some are irregularly mottled, or splashed with white. A few have the head and tail white, the remainder of the body of some whole color, and such are called bald-head, and are very pretty. The pure black are called Kites.

The Ermine or Almond tumbler, see fig. 1, is thought to be the finest colored of all. Fanciers claim that each feather of the perfect Almond is composed of three distinct colors, having a bright yellow ground variously splashed with black and white. One English writer says, "I have had some in my collection that have had few feathers in them, but what have had the three colors that constitute the Almond or Ermine; namely, black, yellow and white, variously and richly interspersed. In short, their beauty far surpasses all description, and nothing but the eye can convey a just idea of them." We should like to see a pair of such exquisite beauties walking into our sanctum some day, for we have never seen a good one yet, and we seriously doubt whether there have ever been any nice ones brought across the Atlantic.

Tumblers are as hardy and prolific as any common pigeon. They should not be allowed to fly with other pigeons, as it is thought to injure their tumbling. A dozen or so on the wing at a time, when at play, make a beautiful sight. They tumble better when allowed to fly but about an hour each day, say the last hour before sundown.

No. 2. Barbary, or Barbe.—This is a small elegant and sprightly bird that derives its name from the northern part of Africa, where it is said to be found in its native state. It has been known in England for a long time, as England's greatest delineator of human character makes one of his characters say, he will be "as jealous as a Barbary pigeon." It is no larger than a Tumbler. It has a broad head, of a squarish form, which should always have a small well-turned tuft of feathers, called the "turn-crown," at the back side. It has a naked and somewhat wrinkled, reddish skin around the eye, that increases with age for three or four years. The beak is short, remarkably stout, with quite a development of fungous skin at the base of the upper mandible. The body is short, compact and round. The color of its plumage, if well bred, is either black or dun; the black being most esteemed, as it has beautiful iridescent shadings on the neck. Some amateurs think them delicate to rear, but we have never bred any pigeon more easily.

No. 3—Pouter or Cropper.—This bird is one of the most singular and attractive in appearance of all the fancy varieties. It is said to have been originally bred in Holland, though our best stocks have come from England. It receives its name from an enormous wind-sack that entirely surrounds the neck, though mainly developed in front. The bird inflates this sack at pleasure, or it may be filled artificially, as we have seen the hunter take the bill in his mouth and "blow up" his bird for exhibition, as a boy would "blow up" a bladder. This peculiarity is possessed by both sexes, but is practiced most by the males. As our cut shows, this puffer, as if conscious of its importance, carries itself, with a true aldermanic dignity, in a very upright manner.

The best bred Pouter is tall and slender, the taller and slimmer the better. When blowing it should stand quite erect, with tail depressed, the wings carried close to the body, and the feet be near together. The crop should be round, large, and extending quite up to the bill. They are of almost all shades of color, and rarely seen of one color, except the pure white, consequently color is entirely a matter of taste. They should be heavily feathered on the shanks and feet.

Pouters are frequently poor feeders, so it is well to change eggs with common pigeons, that are good "feeders."

No. 4—Fantail or Shaker.—This beautiful pigeon is called Fantail from its great development of extra tail-feathers; ordinary pigeons have but twelve, while this bird is blessed with twice or three times that number. When agitated it has a peculiar tremulous or quivering motion which gives it the name of Shaker. The body is rather small, breast remarkably prominent; head and neck small, neck rather long and bent backwards until the head and tail almost meet; while the wings drop below the body.

Snow-white is the most common color of the plumage, though some are pure black; some are "pied," having reddish shoulders, which gives them the name of "saddle-backs;" and some, called "bald-heads," have white heads and tails, with the body black or red.

This bird cannot close its tail like other pigeons, but it can turn the outer edges inwards like the hen, but not as perfectly; hence, it flies with tolerable ease. Its constitution is rather considered delicate. Like all pigeons it breeds more freely when allowed to fly at large, than when confined. D. S. H.

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Tile Machines and Tiles.

Editors Country Gentleman—I notice an inquiry about tile machines, by E. J., York, Pa. In answer to this I will say, that such articles are manufactured in this State, by John Daines of Birmingham, Oakland Co. I think the price is about $100 or $110. I have seen these machines; they are not complicated, or likely to get out of order. They are light and portable, and when packed for transportation, do not occupy much space, and on this account are much prized by tile manufacturers.

The most experienced drainers now prefer the pipe of tubular tiles, to all others, as they are less liable to accident. It has been proved that a small quantity or water will *rise higher*, and consequently *run faster*, in the narrow concave bottom of a pipe, than in the flat and wide bottom of a horse-shoe tile. Some of the best English drainers assert that inch pipe are quite sufficient for the modern branch drains; others prefer those with a bore 1½ or even 2 inches in diameter; but I think the medium size is best. It is a common error to make draining tiles *too large*, as the current is apt to become sluggish in them, and to deposit sediment, which ultimately chokes the drain. Edward Mason. *Detroit.*

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Pope County Ag. and Hort. Society—Officers for 1859:

President—Hon. Wesley Sloan.
Vice Presidents—John Foote, Gordon Thompson, and W. S. Hodge.
Treasurer—A. H. Buel.
Cor. Sec'y—J. M. Raum.
Rec. Sec'y—John M. Boicourt.

The Society will hold a fair next fall at Golconda.

Culture of Hungarian Millet.

Eds. Cult. and Co. Gent.—We noticed an inquiry in the last no. of The Cultivator, from R Hedges of Pickaway Co., Ohio, respecting the culture of the Hungarian Grass. We generally sow it, and the other varieties of millet, in this latitude, (40° 23′ north,) from the 25th of May till the 10th of June. If sown earlier, the weeds (if the ground is not clean,) will get the start of it, and check it, as it grows but little till the weather becomes warm. The ground should be thoroughly pulverized by plowing and harrowing. Then sow, if for seed only, about eight quarts to the acre; but if for hay, from ten to twelve quarts should be sown—following with the harrow till the seeds are covered, after which pass over it a light roller, or much of the seed will not vegetate.

The time for cutting is when the seeds are nearly ripe, and the whole plant is beginning to change to a yellow color. If cut too early, the seeds will not be perfect, and if too late, much of the seed will be lost in curing. The stalks will also be too hard and reedy for feed.

It may be cured in the same manner as other hay. As fodder, after threshing, it is about as good as timothy hay. Horses and cattle eat it with avidity. W. Dennis. *Applebachville, Pa.*

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Early June Peas.

G Butts, Onondaga Co, N. Y, will find Early Juno Peas, of which we have a variety here, large in size, good yielders and free from worms or other insects—a good article for a spring crop, preparatory to sowing fall wheat. I prefer this practice to the naked fallow. It ensures a crop—leaves the ground mellow—keeps down weeds—comes off at or soon after the hay season—and gives ample time to plow for the wheat. If the manure in hand is fresh, it can be put in the pea ground, and be well rotted, and help the fall wheat. We have, in this way, manured in the spring—sowed these peas—took off the crop, sowed to fall wheat, and sowed down to grass, with success. Should the fall wheat fail from any cause, then, in the spring, the land may be again sowed with the Scotch wheat, and again seeded down. These peas, owing to the vines not being naturally long, will succeed on good land without falling down and injuring the crop, though we have seen the vines over five feet in length on rich land. This variety has a rich, broad leaf, white blossoms, thick stalk, and when in full bloom the whole field has a most inviting and beautiful appearance. It is one of nature's sights well calculated to gladden and cheer on the honest husbandman in his toil. W. O. Buell. *Perth, C. W.*

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Fence-Making—Inverted Posts.

I see in The Cultivator for 1858, p. 340, a hint given on inverted posts. This is a thing perhaps not generally known among farmers, and perhaps not generally believed. It is nevertheless true that posts or stakes will last longer if inverted than otherwise; though the top end may be smallest, yet will it outlast the other if inverted. I am not able to give the reason why it is so, but am told that the timber has a natural "suction" by which water or dampness is drawn above the surface of the ground, which rots it off, which is not the case if inverted. Try it, brother farmers. C. F. *Clarion Co., Penn.*

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Barn Cellars.—By your remarks I am led to believe you do not favor barn cellars. I have used a small one for a few years, and like it so well that I am having one, 40 by 60, under a barn now in process of erection. C. W. G.

Popular Breeds of Cattle in England.

In the *Mark Lane Express* of Feb. 14, we find a review of a new volume of the *Journal of the Royal Ag. Society of England*, from which we make the following extract:

By far the most readable paper in this number of the Royal Agricultural Society's work is Mr. Robert Smith's report on the Chester stock show. It is a long way the best thing of the kind the *Journal* has ever had, and quite a reference for future Stewards to turn to. But it is at the same time something more and something less than an actual report of the meeting. We have carefully prepared tables, showing how the different breeds of animals have increased or declined in the entries at these anniversaries. The strength, however, of the paper—and wonderfully strong it is—lies in the introductions to the several sorts and classes now recognized in the prize sheet. We never saw so much useful information better condensed. He has a few great facts to tell us of all the different breeds, be they cattle, sheep, or pigs; while of the origin and progress of some, we repeat, that he epitomises quite an interesting story. Take for example his opening to the short-horn classes, in which he traces them fairly back to the Teeswater, and comes on with them through the Collings, Masons and Bates, up to the Booth blood, "now by almost universal consent, recognized as the best tribe of short-horns in existence." He tells you what the bulls from this famous Warlaby herd are now letting for, and has a glance at all the great short-horn sales of the time He treats equally well, but at less length, of the rise of the Hereford and Devon; while, perhaps, next to the Durhams his most interesting notes are on the early history of the Leicester and other long-woolled sheep. Mr. Smith, it must be borne in mind, has himself been a very successful breeder in cattle, and more particularly of Leicester sheep, so that he speaks with higher authority on such matters than he even would as a steward of the yard. In his estimate how the short-horns stood at Chester, he has to refer to the injurious effects of an abuse we have ourselves long continued to complain of:—

"A review leads me to the opinion that, although the short-horns have now become more the general stock of the country, and were shown in unusual numbers at Chester, they were not there superior to the best bred animals that have been exhibited in former years. The young animals, especially the *males*. are not improving as they ought from such parentage as we have been accustomed to see at previous shows. *The high condition of the cow and heifer stock is unnatural and opposed to common sense. Are such animals really in a state for breeding and milking*—one (at least) of the uses of the beast? It would be well if more attention was paid to the lean meat of a short-horn, and less to superfluous fat. It would be better to err on this side with our first-class bulls rather than to encourage male animals of a smart heifer-like cast, without lean meat—'quality, *with* substance,' being really essential."

We have in other parts of this number some further confirmation of how the uses of the short-horn are extending. Mr. Herbert, in his live stock statistics, asks:—

"What are the breeds of beasts and sheep which form the supplies exhibited in London?" From an analysis of the stock exhibited during the past year, and founded on the most careful observation, we have arrived at the following conclusions:—

Per Centage of Beasts shown in the Metropolitan Market in 1858.

Shorthorns,	33.00
Herefords,	9.25
Devons,	5.00
Longhorns,	1.00
Crosses,	16.00
Highlanders,	2.00
Polled Scots,	4 00
Ayrshire,	0.25
Irish crosses,	8 00
Welsh runts,	1.50
Irish,	9.00
Bremen, Tonning, Dutch and German,	9.50
Spanish and Portuguese,	1.50
	100 00

"The above table shows that the shorthorned breed of beasts now stands at the head of the list of stock for what may be termed general consumption. They have gone on progressing at a wonderful rate since the commencement of the present century, and they are now to be found in almost every county in England, as well as in Ireland and Scotland. We may further observe that half bred beasts, between the Scots and shorthorns, have considerably increased within the last twenty years. The changes in the various breeds in this period have been remarkable. Whilst the shorthorns and crosses have increased, the Herefords, Devons, longhorns, and polled beasts have declined considerably. The same may be said of Welsh runts; but we find a great increase in Irish crosses, no doubt with the shorthorned breed imported from this country."

Hen Manure for Corn—Hill Fertilizers.

Reading C. B. Meek's communication of his experience with hen manure for Indian corn as a top dressing, (Co. Gent., Feb 24,) incites us to send you ours, in which we applied it "in the hill" before planting. We have been looking for more responses to the subjects proposed in your "Reader, will you write for us?" and hope yet to see them.

A year ago last winter, we built a hen house, (before that the hens had roosted under the shed, dropping their manure with that of the barn-yard)—last spring we cleared it out, and kept the contents separate for trying their virtue on our cornfield. We had a large pile of muck near the barn; from this enough was cut down for mixing with the hen manure, and allowed to dry in the sun, the better way to absorb the moisture of the latter. About two parts of muck to one of hen manure made a compost not offensive to handle, and from which very little odor of ammonia arose. Taking a wagon load of it to the field, and a handle basket to carry it while dropping; one man went with a hoe and made a hole for each hill; another followed with a basket of the compost, dropping as much as he could grasp in his hand in each hole, while a third followed to plant, first drawing a hoeful of dirt over the manure, then dropping the corn and covering it in the usual way. Three hands are thus required to plant as fast as one would do without any hill fertilizer.

The "benefits of the application" were seen in a quicker and stronger growth from the time the corn was an inch high until it ripened. The whole field was first manured with long manure from the barn-yard, and the corn top-dressed before the first hoeing, with a mixture of ashes and plaster. The crop was a very good one. We took the second premium at our county fair, last autumn.

On the part manured in the hill as above, the hills *due* on any rod, would give a bushel of ears sound corn. Some of the seed failed—thus some hills had but one or two stalks and some none. B. & Son. *Niagara Co., N. Y.*

Mangold Wurzels.

We have cultivated them here for some years, and found them very valuable for feeding to milch cows, as they made rich yellow cream, and do not taste the butter as turnips are apt to do. We succeeded in growing them on heavier soil than turnips would do well upon. Some of your subscribers seem to have had no small trouble to get their stock to eat them We have no difficulty with ours. Everything about the yard is fond of them. Cows, calves, sheep and swine eat them with apparent relish. We feed them regularly to the cows, and a neighbor fed them to his ewes before the lambing season to bring the milk on them, with manifest advantage.

I do not consider them equal to Sweedish turnips for laying on fat. They are of a more scouring nature, and require to be fed in small quantities. They have also the advantage over carrots for dairy purposes, in growing on stiffer soil and being easier cultivated. They bear transplanting well, which is convenient to fill vacant spaces in the drills. Thomas Bain. *C. W.*

Management of Bees.

Messrs. Editors—The March number of The Cultivator, p. 91, contains an article entitled "Raising of Queen Bees." The following I wish to draw attention to.

"'To breed in-and-in, always leads to injurious consequences in bees as well as in animals" Theoretically it may, but how can it be proved to be so *with bees*, by satisfactory experiment? I doubt the possibility of testing this with our present knowledge of their habits. If "the near relationship" of a drone from the same hive "is repulsive" to a queen bee seeking impregnation, then truly, this wonderful insect is endowed with a faculty or sense as yet undiscovered, so far as I am aware, in the whole animal creation. Permit me to quote the following from the article:

"Has the queen been impregnated by a drone from the same hive, (namely, her brother,) then the female of such a mother is less fruitful than if she had paired with a drone not so closely related; for only seldom will a swarm be thrown out of such a hive. Moreover, the workers are generally lazy, unconcerned about the prosperity of the hive, commence their work late in the morning, and are inclined to rob and carry in but little honey, &c." "Now this is the reason why so many apiarians lose all their swarms—the relationship is too near."

I think this reasoning, and remaining silent upon the many known causes of failure that every one can and should see for himself, is calculated to do harm by consoling many careless observers, who have had their bees "run out" from other causes, and making them conclude their want of success was beyond their control.

My remarks would be too long for one article, so I will only state a few of the causes of failure in bee culture, for the benefit of those who are interested in bees, and who like myself, are anxious to press forward to a better knowledge of the subject. I will give these causes in short accounts of the experience of some of my neighbors. Mr. B., ten years since, had twenty hives, the product of one warm in five years. He now has eleven, He never "took up," i. e. condemned to the sulphur pit, a single swarm. For several years he has not realized more honey than he required for his own use, and with his management he will soon be reduced to the original number, one. Why this decrease? Mr. B.'s management is a shed made of boards 16 feet long. The hives rest on a plank two feet from the ground, southern exposure—his hive, the common box hive. According to Mr. B.'s account, his bees have been mostly destroyed by worms. An inspection of the hives and the cracks in the boards of the shed, is all one needs to feel satisfied that the worms have done much towards lessening the bees. Now, what better or more convenient arrangement could be devised, than the hives near each other, and a good plank to crawl on, for the breeding of worms—easy communication and never disturbed? Add to this, occasionally a weak hive is robbed by a strong neighbor, and deserted and destroyed; this passing unnoticed, makes an excellent nest for worms, and in due time all your hives are worm stocked.

Worms robbing, removing too much honey, thus causing starvation, and endeavoring to save weak stocks, do more than all other causes I am acquainted with, to depopulate an apiary. To cut my story short for the present, I would advise all who have thus managed, and who have had like results, to reform—to tear down their shed—to follow closely Mr. Quinby's directions as given in his book, and his success will surely be theirs. Bees can be driven from a worm-infested hive, placed in a good hive, under favorable circumstances, and they will thrive, and a large and flourishing apiary may be established from them, showing that no deterioration in the breed had taken place. I state this from my own experience.

Should this meet your approval, I will give the experience of others from time to time, showing causes of success and failures. If thought desirable, I will give a plan for those who love to speculate and experiment, that will enable them to effect, though not with certainty, the impregnation of a queen by a drone, *not her brother*, if from the same hive. E. P. *New-York.*

Please continue the subject, and send us your address, that we may send you the Co. Gent. in which your articles first appear.

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Cotton-Seed Cake.—The use of this as an auxiliary article of food for stock, is becoming more extensive in England, and taking the place of oil-cake with a good many feeders. Is it not too little appreciated in this country? The chemist of the Royal Ag. Society of England has analyzed several samples, and finds that they vary in composition more than samples of linseed cake do. This is a disadvantage, certainly.

Trenching Land for Vineyards.

Messrs. Editors—I wish to inquire if it really is necessary that land intended for a vineyard should be deeply trenched, as the books on grape culture recommend?

I have seen many vines set in places where the ground never had been plowed more than eight or ten inches deep, yet, where it is kept cultivated, they seem to be doing well. What advantage can it be to bury the soil beneath a foot of sour, cold and inert subsoil, and why should grapevines need a soil prepared in this manner any more than fruit trees do?

I believe that I have somewhere seen it stated that pear trees, which are double-worked on quince, are generally very short lived. Is it so? And would it prove true if the double-worked variety was one which succeeds well on quince? Which kind of pear would you advise one to take as a stock for double-working?

How can one distinguish the Fontenay quince from the Angers, and which do you think preferable as a stock for the pear? Old Subscriber. *Worcester, Mass.*

Grapes may be raised with deep plowing only, but the largest and finest cannot be obtained without trenching or deep subsoiling, accompanied with very high manuring. The very finest Isabellas, obtained by this high cultuure, (which of course must include constant cultivation and proper pruning,) sell readily for 15 to 18 cts. per lb.—common ones are heavy on the market at 8 or 10 cents. Most sorts of fruit are greatly improved by trenching, but the grape sends its roots further in a given time, and is a ranker feeder than most fruit trees. If, however, we had to choose between a deep soil merely, and ceaseless cultivation, we would take the latter. An acquaintance who does not manure highly his ten acre vineyard, cultivates it *fifteen times* in a single season, and raises grapes that are scarcely excelled.

"Refractory" sorts of the pear are not apt to be very long-lived, even if double-worked, but some do finely for a while. The best *intermediates* for double-working are Beurre d'Amalis, Angouleme, Louise Bonne of Jersey, &c.

The Paris or Fontenay and Angers stock are both excellent—we scarcely know which to give the preference. The Paris is more spreading.

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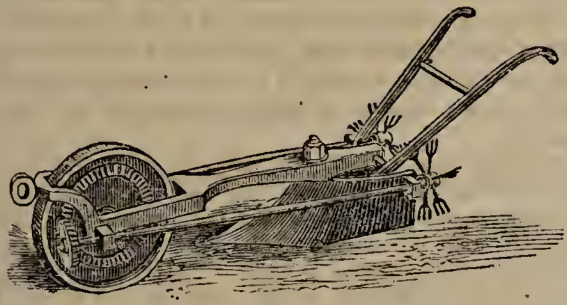
Hen Manure for Corn.

Messrs. Editors—Seeing the statement of Mr. Meeks, in regard to the use of hen manure for corn, I beg permission to say something also. I fully concur with him in regard to the furnishing of subjects, and if it would not be asking too much, I should like to have you publish that article again or give us some new subject for the benefit of the new subscribers who have not that no. I find that the great trouble with myself is to find a subject, which, after being supplied, I can go ahead.

In 1852, I had a lot of hen manure in an old corn house which I had fixed up for my hens, and I concluded that it would be a good plan to try it on the land rather than to sell it as many of my neighbors, and in fact myself had been in the habit of doing. So I planted about thirty rows through the middle of my piece on it, and the rest on old well-rotted stable manure, and the corn on the hen manure was taller, larger and the best corn every way. The next year the piece was sown down with wheat, and, where the hen manure was, it was the best, and every one asked the reason for it; and when I came to mow the grass, it was the best where the hen manure was applied.

Last year I had one acre on it, and one on stable manure; the one on the hen manure gave twenty bushels of shelled corn the most, and was the best corn; both were planted the same time on the same soil, and received the same culture, viz., cultivating and howing twice.

My way of using it is this: put about a large handfull in the hill, and cover over a little earth; then drop the corn on, and cover; and after the corn is up, put a little around the corn, but be careful not to let it touch the seed or young stock, or to get too great a quantity in the hill, for then the corn comes up and is as black as ink, and soon dies. But on the whole I find it the best manure that I can use on my corn, although great care has to be used, but I shall hereafter compound it with dry muck and ashes, and then there will not be so much danger in its use. M. *Richmond, Me.*



Wetherel's Horse Hoe.

In answer to occasional inquirers, we give the above figure of this implement. The small revolving hoes scatter the earth among the plants in the row, and perform thus the usual labor of hand hoeing. The rapidity with which the fine earth is shot into the rows causes all weeds not over several inches high to fall before it, and to become completely buried, if only an inch of earth is deposited; while the stouter plants of the crop are not affected. We have given this implement a partial trial, and were favorably impressed with its performance. We intend the present season to experiment with it fully, and to report to our readers.

Shares' Implements.

Messrs. Editors—In the fall of 1857, I plowed ten acres of my farm, which had not been broke up before in eighteen or twenty years. It was covered with bayberry and sweet fern bushes, wild Indian grass, which grows in bunches, and some white birch trees, which we cut off, and then burnt over the lot before plowing. In the spring of 1858, I did not cross plow, but put Shares' Coulter Harrow on to the inverted sod. It worked admirably. It went right over bayberry roots, white birch stumps, &c., without clogging or breaking a tooth. I think we did not have to put a hand to it in harrowing the whole the whole ten acres. It done the work first-rate for so rough a piece of ground. It was the only implement that I used in preparing the ground, excepting a bush harrow where I sowed oats. It did the work as well as if I had cross-plowed and harrowed with my Geddes harrow, and in about a quarter of the time. The harrow has already saved me more money than I paid for it, and I conscientiously recommend it as a first-rate implement for the purpose it was designed for.

I used the Cultivating and Hilling Machine among my potatoes on a part of the ten acres spoken of above. On the very roughest part it worked first-rate. It is a thorough pulverizer and death on weeds. It leaves the ground level and as fine and mellow as a chest of meal. It hills potatoes first-rate and is as good as a double mould-board plow for furrowing.

The Potato Covering and Hoeing Machine is another first class implement. A man can cover an acre of potatoes with it, as fast as he could furrow the same, and do it better than he can with a hand hoe. The machine leaves a wide mark so the potatoes can be cultivated out when they are just breaking ground without any danger of getting on to the hills. Edward Aborn. *South Seekonk, Mass.*

Reaping Machine and Tread Powers.

Messrs. Editors—I have on my farm, embracing 350 acres of land, about 65 acres of wheat growing, 40 acres of which are in a condition to use a reaper. Will it pay to buy a machine to cut that number of acres? And if so, which of all the patent reapers and mowers is the best, and where can it be had, and at what price? And also, which is the best two-horse tread power threshing machine, and where can it be procured? In answering the first question, I would have you take into consideration that I intend adding another 20-acre field to those already fitted for the mower, each successive year, for a few years to come. W. C. *Marshall, Mich.*

Several points must be considered in determining the economy of reapers. A good one will cut some ten acres a day—they have often done more by hard driving. The two horses and two men are worth about $3 a day, perhaps more. Hence the cost of cutting is about 35 cents per acre. A laborer with a cradle would ask about 75 cents per acre—and therefore the direct saving on the 40-acre field, would be about $16—the cost of the reaper is about $115—the interest on which at 7 per cent. would be $8, and the ultimate wear and tear, accidents, &c., about the same. The yearly cost of the reaper would be about $16—the amount yearly saved on a 40-acre field.

But there are other considerations greatly in favor of reapers. The farmers' horses are usually nearly idle in harvest, and may nearly as well as not be employed in cutting grain, and saving this severe exertion of men. It is also very difficult in most places to procure a sufficient supply of good cradlers, and the loss by a few days delay in cutting 40 acres, would probably amount in a single year to the entire cost of a reaping machine. Wheat cut before all the green streaks have disappeared from the chaff, according to our own measured experiments, affords an amount of more than a bushel per acre with a fair crop, when compared to the same crop allowed to become dead ripe; while the waste by scattering and shelling at the latter period is not trifling. Still greater than all these, is the occasional loss by continued rains when harvesting has been delayed. Taking all these facts into consideration, our correspondent may judge of the propriety of purchasing a reaper.

There are several well-tried, or what may be termed *standard* machines, whose value has been amply proved, but which on the whole are so nearly alike in excellence, that skillful farmers differ as to the best. Among these are Wood's, Allen's, Ketchum's, Kirby's, Ball's, Burrall's, Seymour & Morgan's, &c., and besides these there are several new ones, some of which are of probable excellence, but which need further proving. It is well to bear in mind, that while some reapers are evidently superior to others in *principle*, they may be really inferior in performance in consequence of bad manufacture. It is, therefore, always best to buy of an establishment whose machines have been well proved and endured continued use. We refer to our past advertising columns for prices and places of manufacture.

The best tread-powers are made by Emery Brothers, Pease & Eggleston, and Wheeler, Melick & Co. of this city, and G. Westinghouse & Co., Schenectady—all these machines are good.

Muck as a Manure.—Mr. Phipps, of Orleans Co., N. Y., gives in the *Rural New-Yorker*, an account of some experiments in applying muck directly to the soil. About 200 loads were drawn in the winter of 1857, from a tamarac swamp, upon adjoining loamy land, and left in small heaps suitable for spreading. He covered about one-half of a lot of fourteen acres. The remainder was dressed with barn-yard manure. The field was planted to corn, beans, and potatoes, and produced a good crop. It was hard to tell which part of the field was the best, that fertilized with muck or manure.

Barley—Rotation of Crops.

Messrs. Editors—In The Cultivator for Feb. 1859, is an invitation to farmers to a free discussion of the subject of raising barley and the substitution of other crops in its place. With more or less acquaintance with barley for the last twenty years, I have long since come to the conclusion that it was rather a shy, uncertain crop to raise, and that those farmers, who place their chief dependence on it to make money, would meet with many disappointments.

The causes of the uncertainty of barley as a paying crop, are many and various. Some of them are given in the article already refered to; and as there stated, there undoubtedly are other causes that are not well understood, and there are some other reasons why barley has failed, which it may be well to consider. Insects have been mentioned as affecting the crop, and it is believed by many farmers in this section, that the common wheat midge seriously damaged their barley the past season, Not many days ago a farmer told me he "had straw enough for 40 bushels an acre, but only got twelve." Barley is frequently damaged by wire worms, and probably by other worms and insects in the soil, and perhaps it is more affected by bad seasons than other and hardier crops. I think in many, if not most instances, that two-rowed barley would have done much better than four-rowed—the former being, in my opinion, more hardy and less difficult to raise.

But in my opinion the principal cause of the failure is, that barley is naturally a difficult crop to raise—that, as a general thing, it only succeeds in making a paying crop where all the circumstances are favorable, and that this has not been sufficiently well understood by the great mass of farmers—that consequently they have been less cautious in entering into the cultivation of this kind of grain, than they otherwise might have been. Consequently, barley has been sown on all kinds of soils, after all kinds of crops, and all kinds of cultivation, and, of course, with all kinds of success—the failures greatly predominating—so that now the general cry is, "I shall sow no more barley."

Now I come to your question—"what course then, shall farmers pursue?" I cannot give a better answer to this question than by stating the course of farming I have followed for the last four years, and which I have not yet seen any reason to change, which is a five years rotation as follows: First year, corn; second, barley, if the soil is suitable and in good condition—if not, oats; seed down with second crop; third, cut early for hay, and save the second crop for clover seed; fourth and fifth years, hay and pasture as circumstances require.

Now I will answer the question, "which is likely to prove the most profitable, corn or barley?" Corn, decidedly. But why sow barley? Because corn already has its place in the rotation and I wish to seed down with the next crop after corn. But if barley is an uncertain crop, why not sow oats? Because barley is a much better crop to seed down with. On good land oats, when sown after corn, in a favorable season, will grow too rank and large for clover or grass seed to do well. Were it not for the seeding down, I think oats would be a better crop than barley to raise. And then I would only sow barley after corn or some other hoed crop; then on a good soil, with good cultivation, I think we may reasonably expect a fair crop.

As to winter barley, as yet that has been more uncertain in this section than spring barley, owing as far as my observation extends, principally, if not wholly, to its great liability to freezing out, or winter killing. Where it has come through the winter in good condition it has done first rate.

A few words in relation to "cultivating more land than we can farm thoroughly." I break up my grass land when it has been seeded down three years, as by that time it is generally pretty well run out, and wants seeding over again. I plant corn the first year because I find it a profitable crop to raise, and because the succeeding crop of grain will be much better than it would be if sown on a sward. I also think that clover and grass seeds are much more likely to take well when sown with a crop that has followed corn. This course of farming gives a large proportion of forage crops, and thus enables the farmer to keep considerable stock. I also believe that when judiciously carried out, it is well calculated to improve the soil, and at the same time to give a reasonable profit on the labor and capital invested.

One thing more, and I am done. According to the census report for 1850, the State of New-York produced more than two-thirds of all the barley raised in the United States. If this continues to be the case, and there is, as undoubtedly there will be, a great falling off in the amount sown, then may we not reasonably expect higher prices, which will, in some measure, make up for a comparatively light yield of grain. F. *Orleans Co., N. Y.*

Letter from John Johnston.

Near Geneva, March 7th, 1859.

Messrs Editors—The weather here is mild and spring-like—mercury often from 40° to 50°. On the whole we have had a singular winter—a few days hard frost; then warm and the ground quite soft, and I may say we have no snow in this neighborhood—the wheeling always better than sleighing. It has been one of those winters called bad for the growing wheat; still, in this neighborhood, it looks well. Even the most inveterate croakers, cannot complain much. Although my observation extends only a few miles around here, I should judge from it that the wheat so far is safe, but the drains *under* it have no doubt saved it in this *section*. How is it where draining is not commenced?

We have now a prospect of an early spring. I have a memorandum of the time I turned to pasture, and it is singular to see how uniform the seasons have been after all, with the exception of 1830, '34, '36, '44, and '47, which were all late springs. There has not been over a week's difference in the others in this time. I have turned my cattle to pasture, say from the 15th to 21st May, since 1847; but draining and high manuring bring grass much earlier; the ground gets sooner warm when drained and well fed. Before 1847, I kept my drained land in tillage, and did not know the effect of it on grass, but it is as beneficial there as anywhere.

I have sold my fat sheep, to be taken away on the 24th of this month. By that time the 501 sheep will have consumed 24 tons 144 lbs. of oil-cake meal, with 40 days of good clover hay, and with straw from 23d Nov. until 12th Feb., all they would eat, and an immense quantity to trample down to absorb the liquids and make food for the land—some would say for the crops; but feed the land and it will feed the crops. Yours truly, John Johnston

Draining with Boards.

Our way of underdraining with boards, is to have the boards sawed an inch thick—one five inches wide at one end, and six inches wide at the other. The other board that we nail to that, (hog-trough fashion,) is one inch narrower, so as to make the troughs lap over each other as we lay them in the drains. We generally lap them about six inches. Some farmers say put them down two feet, some more; but our plan is, more or less, to suit the situation; in some situations two feet would be plenty; others, six feet little enough. The object is to go down till you come to the spring. The meadow where we have been draining, is black mud about two or three feet deep; then comes gravel. I had an experienced drainer putting in a few drains where was a mirey place of a few rods square that could not be ploughed; I paid no attention to him, having so many other things to attend to, and considering that he knew more about the business than I did; but he did no good; horses would mire through the sward. I went down after the plowman had given the job up, and with a boy, in four hours we put in an underdrain that dried the piece, so that I had better corn there than any where else in the whole field. We went through the mud with our drain, and as soon as we struck on the gravel the water boiled up as from a fountain, and in such a situation sap pine boards will never rot; all you have to do to preserve them is to keep them always wet. E. O. 2 *mo.* 4*th*, 1859.

Inquiries and Answers.

Corn on Moist Land.—I have a piece of land that has been mowed six years. It is a sandy soil, and so moist that rye is liable to winter-kill on about half of it. I thought I would put on a moderate coat of manure, and plow it in and subsoil it, and harrow it well, then furrow it out and manure in the hill, and plant with corn. Would that be a good plan, or would you do differently? I have Prouty & Mears' plow, Eagle C, ten inches across the share—what size subsoil plow do I want to follow it? L. C. *New-Milford, Conn.* [If the season should prove dry, this course would probably succeed well—taking it for grantod that the wet portions are not claycy enough to bake after the spring working. Underdraining the wet parts would be the best thing that could be done, and next to that we would recommend plowing the land in such a manner that the dead furrows may be in the lowest parts, which may be deepened by a few extra furrows, and shovelling out the loose earth. The subsoiling would be useful, but far more so on drained land. Thorough subsoiling requires four horses for the operation; the stronger the team the *deeper* the loosening, without much regard to the size of the common plow which precedes it. Therefore, for a moderate subsoiling, select a two-horse implement; for deeper work, one for four horses.]

Vine Borders.—It would be very advantageous to me, could I build a grapery this season, say in May or June; but I have no compost or other good material with which to form the border—nor do I know where to get it in my vicinity. My only resource is my manure heap, made sineo November by a pair of horses, two cows, and a couple of pigs. I might procure next month, some street-sweepings from a neighboring village. By advising me through The Cultivator, how to manage, perhaps you would oblige more than one of your many readers. J. V. [Stable manure should form the principal active ingrodient of a vine border—say about one-third or one-fourth, and two-thirds or three-fourths good fresh turf, applied in as thin altornate layers as practicable. One-tenth crushed bones, or one-twentieth ground bones would be a useful addition. Street-sweepings would be useful, and would need a smaller admixture of turf. If sufficient manure cannot be had, use a little guano or poudrette, with a larger portion of turf.]

Root Steamer.—Will you, if not too much trouble, give us a description of a feasible steaming apparatus, for hogs and cows. We steam hay a little, but lack the appliances. We have nothing but a farmer's furnace. L. W. J. *Hartford, Conn.* [Our correspondent will probably find the desired information on p. 115 of the Illustrated Annual Register for 1858.]

Culture of Rape for Sheep and Soiling.—I see J. M., Morpeth, C. W., asks if rape can be recommended for sheep. I answer yes. If he raises sheep, I recommend him to grow rape. I raised rape in England, and the last three years I have grown it in Canada West. I consider it the best green food that can be grown for sheep. I likewise found it very good for soiling cattle and young calves. If J. M. wishes more information regarding the management of raising it, I will very freely give it. The seed can be procured in Guelph, C. W., imported from the best seedsmen in England. Practical. *Wellington Co., C. W.* [Wo shall be much obliged to our correspondent, if he will favor us with the details of his mode of culture, and the disposition he makes of the crop.]

Velocity of a Horse Power.—The larger the band-wheel of a tread power, and the smaller the pulley of the machine it drives, the more velocity with the same speed of the horses or mules which propel it. Does it not require more force or weight to put and keep it in motion, than it does with a smaller band-wheel and larger pulley? It seems so to me. [You are perfectly right.] I have a tread power requiring a larger band-wheel (i. e., in diameter,) to give it the required velocity, and to do justice to the beasts which propel it, but would like to have your opinion first. H. K. [If increased power as well as greater velocity should be found requisite, the latter is to be obtained as above proposed, by increasing the diameter of the band-wheel, and the former by raising the inclination of the horse power sufficiently to accomplish the desired end.]

Poultry House, &c.—Can you, or any of your correspondents, give me the most cheap and improved plan of a poultry house, and yard. J. W. A. [In our Annual Register for 1859, pp. 220 and 221, you will find just what you want.]

King Philip Corn.—Can you or some of your numerous subscribers, inform me where I could procure some of the "Improved" King Philip or Brown corn? H. S. F. *Brooklin, C. W.* [We do not know anything of an "Improved King Philip," but the genuine King Philip corn, can be procured of J. J. Thomas, Union Springs, Cayuga Co., N. Y., and we presume at most seed stores.]

Delaware Grape.—Will you have the kindness to favor me, through The Cultivator, with a description of the fruit, growth, &c., of the *Delaware grape?* By so doing you will much oblige A Subscriber. [The Delaware grape is a very hardy, vigorous grower, the wood small and short-jointed—the bunches rather small and very compact, often shouldered; the berries about half an inch in diameter, of a copper-rose color—skin thin, very little pulp, flavor sweet, sprightly, and excellent. Holds about tho same rank among American grapes that the Seckel does among pears,—for its excellence, hardiness, and small sizo. It is generally regarded as the best hardy sort.

Buckwheat for Sheep.—In the Co. Gent. of Feb. 17th, W. S. inquires as to the propriety of feeding buckwheat to sheep with lambs. Having had some experience in this matter, I would say buckwheat is one of the best grains to feed sheep and cows where a large flow of mild is desired. I should not, however, advise to feed it before they have dropped their young, because its tendency to increase the flow of milk, would be likely to injure the udder. For feeding laying hens, it does very well for a variety, but should prefer corn or some other grain as the principal food. Lawrence Smith.

Rats.—Can you, or any of the readers of your journal, inform me how to banish rats from a dwelling? I have poisoned them, and in that way can keep them off awhile, but in a short time they get back again. In spite of a wide and deep stone foundation, they have "mined" into my castle—an octagon gravel wall house. Is there no way to expel them, and then barricade them out effectually. T. Boyer. *Gallatin, Tenn.* [In answer to the above, we give the following from another correspondent, who says—"For rats take a box, say one board wide—the wider the better—and from four to six feet long, with a door at each end, (and wire grating for a window,) and raised by an old fashioned well-sweep and a treadle, to drop the doors from a wire from the side. The longer the trap, and the more the bait is scattered, tho greater number of rats will be caught at a time. Those that have no dog, may let them run out in a bag to destroy them. N. J.

How to Raise Muck from a Pond.—I have a poor pieco of land adjoining a muck pond, which has plenty of muck from three to six feet in depth, which is always covered with water to the depth of two to four feet along on the shore whero I desire to get out the muck. Can you give me the information as to how I shall get out, *at the least expense*, a few thousand loads of muck—and do you think it would pay to use on poor, light, sandy soil that has been sapped by its former owners for the last fifty years? Should I require a dredging machine, and if so, what sort, and what will it cost? What effect (compared with other methods,) will it have to spread it on the land as fast as drawn from the pond? I should be happy to hear from any of your subscribers who have had experience in taking mud from a pond covered with water—explaining the best and cheapest method of doing it. J. B. J.

Guano for Corn.—Will you please inform me as to the proper manner of using guano in the cultivation of corn on green sward. D. P. G. [Compost it with three or four times its weight of dry peat, or friable loam, and after remaining a few weeks, drop a handful in each hill at the time of planting. Or, having first furrowed for the corn, drop a spoonful of clear powdered guano at each hill, cover it an inch deep, drop the corn on this spot, and cover as usual. The latter mode may be easiest in many cases, but in dropping the clear guano, it should not be in a heap, but spread over an area of six or eight inches. The inverted sod must of course have been previously well harrowed]

Seeds.—Several inquirers for Apple-pie Melon and other Seeds, are referred to the advertisement of Mr. Thorburn, in this number, p. 181, headed "Novelties."

"Industry's" 50 Acre Farm.—"Subscriber," Mercer county, N. J., makes some inquiries about the account of a 50 acre farm, which we copied from a Philadelphia paper, into the Co. Gent., vol. 12, p. 363. We fear that description of "Industry's" farming, will have to be considered as a fiction, as the writer has failed to answer any of the numerous calls which have been made upon him for farther information.

Malt Dust.—Will you inform me through The Cultivator, what malt dust is good for—if it is good for corn, and if so, what amount, and how to be applied, and at what time—whether in the hill at planting, or when up. James Higgins. [Browne, in his Muck Manual, says that malt dust excels in stimulating a cold soil, and answers best as a top-dressing in spring, and recommends 20 to 30 bushels per acre for grass lands—from 30 to 60, for barley or turnips, and from 40 to 80, for wheat. If any of our readers have used it, we shall be glad to hear from them.]

Cows and Calves.—Is there any better market for our calves, than to sell them at a week old for 50 cents, which is the price for "deacon" skins? When we raise them, they bring only from $10 to $15, at two years old, which does not pay for raising. Our dairy cows bring us from $20 to $30 per annum. After deducting cost for keeping and labor, it leaves a very small profit, if any. Each cow consumes about two tons of hay during the winter, which is worth $10 per ton. Native. [We do not know where this comes from, and consequently cannot advise as to the market for his calves. If our correspondent's cows are well fed and cared for, and their milk properly manufactured into butter or cheese, they ought to bring him in more than he states, in almost any part of the country. We shall be glad to have some of our dairy farmers inform us as to the average product of their cows]

Red-top Seed.—In your next, please give the price of Red-top seed. P. B. *Otego.* [We do not find it for sale in this city, but our dealers say they will soon have it. It usually comes in 5-bushel sacks—price per sack, from $5 to $7—per bushel, $1.50@1.75.]

Bones.—I have looked carefully at all that you have published on the subject of dissolving bones. We have no bone mill near, and if means of dissolving bones, at an expense not too great for the farmer, could be had, this exceedingly valuable manure would be within his reach here. A summary of his practice on this subject, with a statement of the expense, from some of your correspondents similarly situated with us, would be valuable. W. O. B.

What Ails my Horse?—I have a valuable young horse, and should like to know what ails him: His symptoms are these: He had not been harnessed for a week. I took him out to drive to the city, five miles—he seemed very inactive—could hardly raise a trot—he fell down—did not seem to care whether he got up or not—finally he got up, and came home just like an old worn-out horse, with his head down—I put him in the stable—he ate and drank as usual. The next day or two, he was stupid and stiff—could not turn round short—rather full or bloated. I found he was very foul—had him well cleansed, and gave him loosening things, so that he passes off freely—he is quite fleshy. If any of your numerous readers can tell what ails and what will cure him—he yet remains stiff and inactive—they will greatly oblige S. L. Hotchkiss. *Wolcott, Ct.*

Making Manure.—I am quite favorably impressed with J. B. B.'s manner of making manure, as represented in Co. Gent. of Feb. 17, p. 108, as I am satisfied it is the most economical method of saving the whole, both the solid and liquid parts, and increasing the bulk. Will the writer inform the readers of the Co. Gent. about his arrangements for feeding? W. A. *Fairfax C. H, Va.*

Water Troughs—Carding Cattle.—1. What is the most approved material and manner for making a water trough for barn-yards? I have seen some good ones, but wish to learn more.—2. Is it a practice among careful stock-growers to practice the daily use of the cattle card? I have tried it some and most of the animals seem pleased with the arrangement. Is it thought to be worth while to do it? F. L. W.

Cane Syrup.—Can any one answer decidedly, whether the syrup of Chinese sugar cane will sour in warm weather to spoil it, or not. J. B. Jones. *Clinton Co, Iowa.*

Wolf Teeth.—Can you tell me what wolf teeth in horses are, and whether they will make a horse blind? A. B. [Wolf, or what are more generally called "blind teeth," are said to come out "between the bridle tooth and grinders—a small long tooth, without roots, and not inserted in a socket, but merely in the gum of the upper jaw." They should be extracted, as there is no doubt that they frequently cause blindness.]

Stabling Cattle—Manure.

Messrs. Editors—I should be glad to hear, through your valuable periodical, the opinion of some of your subscribers on the subject of "*loose boxes, versus stalls*," for cattle. I do not altogether like the plan of tying them up in stalls. They appear to me to be too much confined. I have just completed a barn, stabling attached, on the loose box principle. Each stall or box is fitted with a rack, the front of which is perpendicular, and a manger below. As the cattle are eating, the hay will fall into the manger, instead of on the ground. This I consider an improvement on the old fashioned, slanting rack.

My plan of feeding to be something like this: Each beast to have his manger filled from the barn floor with straw, and his rack with hay from the mow above. Some will only get straw and a small supply of roots, &c. I find that cattle fed entirely on hay, will still eat a little straw. What straw they leave will be spread for bedding. No dung is to be thrown out, as it will drop evenly about. This will be a saving of labor, besides making a large quantity, as I believe it will, of first-rate manure. Once or twice during the winter, it is my intention to clean out the stable and haul on a sleigh to wherever it may be wanted. The floor of each box is formed of stiff clay. I commence with a liberal supply of straw or some dry litter. I should think sawdust would be a good thing to start with, as an absorbent. The stables are well lighted and ventilated. From what I can learn, cattle kept in this way are much cleaner than tied in stalls. F. F. *Credit, C. W.*

☞ We learn that our friend, Joseph Juliand, 2d., of Bainbridge, Chenango Co., has sold "Sultan," the Short-Horn bull lately advertised in this paper, to B. Zebina Stebbins, Esq., the agent of a stock-breeding company at Deerfield, Franklin Co., Mass.

Notes for the Month.

THE AGRICULTURAL COLLEGE BILL.—Since our last we have received Mr. BUCHANAN'S Veto of the Bill granting Lands in promotion of the cause of Agricultural Education. This Bill was only passed by Congress after much opposition, in overcoming which the thanks of the public are due to Mr. MORRILL, its originator, and perhaps also to others. The veto of the bill is based upon its being both "inexpedient and unconstitutional," because, 1, it will deprive the Treasury, the President asserts—of nearly the whole revenue it next year counts upon from sales of Public Lands; 2, it interferes with the constitutional relations existing between the General and the State Governments; 3, it will operate to the injury of the new states; 4, its favorable influence for the advancement of agriculture and the mechanic arts is questioned, and, 5, it would interfere seriously with already existing institutions.

We give these positions assumed in the veto message, which do not represent the whole argument it contains, not in order to combat them, but to show in part the grounds on which the designs of Congress in behalf of our immense Agricultural interests, are ostensibly prevented from execution by the exertion of the objective power lodged in the hands of the President. If the same objections were considered of equal force, when the interests of merchants, manufacturers, and speculators are brought up for fostering aid; when steam lines are to be established, tariffs to be adjusted, bounty warrants thrown out in a flood over the country, and vast territories partitioned off section by section to railroad lines, the Farmers of the United States would feel less sensibly a discrimination against their claims, which must strike them, we fear, as partial and one-sided, however it may be fortified by constitutional considerations and legal arguments.

"HONEY BLADE HUNGARIAN GRASS."—In answer to several inquiries about the seed advertised under this name, we may state that Mr. BENTON of St. Louis, who advertises it, claims that it is a "superior variety, although of the same species as what is here known as the Hungarian Grass." The Hungarian grass we have heretofore shown, is the true German millet—*Setaria Germanica* of Loudon. It is called by the French, *Moha de Hongrie*. and under this name has been distributed by the Patent Office. That it has proved a valuable forage crop on the Prairies, there can be no doubt, and we doubt not that a larger crop of hay can be produced from it at the east, on well prepared soils, than from even good meadows. We have published, during the last twenty years, many communications highly favorable to it, from those who have cultivated it under the name of millet.

CATTLE SALES.—We understand that Dr. HERMAM WENDELL has sold his very fine roan bull "Duke of Cornwall," to the Messrs. BRACE of Herkimer Co., and to EZRA MEECH, Esq., of Shelburne, Vermont, roan bull "Lancashire." Both the above are the get of imported Lord Ducie (13181)—the Duke of Cornwall out of imported Lady Liverpool, and Lancashire out of Dutchess of Exeter. We cannot but congratulate the farmers living in the vicinity of where these valuable animals are to go, upon the opportunity they will have of improving their stock, for we understand that the Messrs. Brace intend to allow their bull to serve for a moderate sum, and we presume Mr. Meech intends to do the same.

RAPID GRAFTING.—HENRY SMITH, now of Aurora, Cayuga Co., N. Y., set in a single day, working only ten hours, *three thousand* root grafts, a few weeks since while in the employment of J. J. THOMAS of Union Springs; an assistant applying the wax plasters; and on a subsequent day he *grafted thirty-five hundred within eleven hours*. The work was done in the very best manner. We intend to describe on a future occasion, with illustrations, the mode of operating by which this work was done, although it may not be new to some nurserymen, who may be familiar with equally expeditious labor.

THIRTY-ACRE FARM.—A correspondent in Connecticut, in a private letter, says—"I have a farm of thirty acres. Two years ago we could barely keep three cows, one heifer, and two horses. Now we have twelve cows, four heifers, one sheep, and three horses in summer and two in winter, to say nothing of hogs, of which we keep a goodly number. When we can keep one cow to every acre, I will give you the details. We soil the cows of course."

CORRESPONDENCE.—Our friend JOHN JOHNSTON informs us that, in addition to all he has written for the Agricultural papers, he has answered, during the past year, no less than 164 private letters addressed to him, making inquiries in regard to farming matters. Mr. J. says—"Of the 164, three omitted to send stamps—four sent each a stamp extra, I suppose to pay for paper and envelop, and one sent nine stamps, asking me to write any time any thing new occurred which would instruct him."

☞ The Transactions of the Hampden Co. (Mass). Ag. Society for 1858, have been sent us by W. E. BOICE, Vice-President for Blandford. The pamphlet includes also a report of the Horse Exhibition held last fall at Springfield. We are pleased to see that the public-spirited efforts of the officers of this body, appear to have been rewarded by an unusual degree of success.

POTATO DISEASE.—We have a letter from Hon. LYMAN REED of Baltimore, accompanied by documents which would occupy more than a page of our paper, with the request that they may appear in the Co. Gent., all tending to show that Mr. Reed has discovered the true cause of the potato disease, in the attacks of an insect on the tubers, roots, and stalks *under ground*. We have looked over the statements and certificates with some care, but they do not seem to us, by any means, to demonstrate Mr. Reed's position, and in the present crowded state of our columns, we are unable to devote so much space as is required for a discussion of the subject, the more especially as we do not see how it would lead to any beneficial results.

ALDERNEY BUTTER.—Mr. JOHN T. NORTON of Farmington, Ct., who has a very fine herd of Alderney cattle, has, we are informed, at this time, fourteen cows in milk, the butter from which he now sells—a portion of it to a dealer in Boston, and a portion of it to the Astor House, New-York—at forty-two cents per lb. The best butter, it is generally admitted, can be made from Alderney cows; but it must be *well made*, to bring such a price as this. Mr. N. informs us that his cows last year averaged 176 lbs. butter each.

VALUE OF BACK VOLUMES OF AG. PUBLICATIONS. —We make the following extract from a business letter written by a Michigan subscriber of the Co GENT:—"We are very proud of your Agricultural Publications. We have the *Genesee Farmer* of January first, 1831, and the most of your agricultural papers ever since, all neatly bound and in good order, except they are well thumbed. We would not part with them for five times their cost."

GRASSES FOR THE PRAIRIE.—A Kendall Co. farmer, "twenty-one years in Illinois," speaking in the *Prairie Farmer* of grass-growing and culture, says: "To have good pasture we must have a variety of grasses. Ours (pronounced as good by a New-York cattle man as he ever saw,) is composed of white and red clover, which we have sown in the chaff; timothy, which we have got in both by foddering on it, and by sowing the seed; June grass is natural to this region, and soon shows an abundant proportion, but none too much." He has also some blue-grass, and says that all tame grasses can readily be introduced by merely sowing the seed either on the burned-over or unchanged prairie. We believe this a subject of great importance to our Western roaders—the prairie grass cannot be depended upon either late or early in the season.

☞ It may not be improper to mention here, that the Junior Editor of the Country Gentleman and The Cultivator, proposes to spend several months abroad the coming season, for the purpose of acquainting himself as thoroughly as his time will permit, with the Agriculture and Horticulture of Great Britain and the Continent. His intention at present is to devote May and a part of June to a hurried tour through some portion of France, Northern Italy, Switzerland, Germany, Belgium, and the Netherlands, to be present, if possible, at the Agricultural Exhibition which is promised at Paris during the summer, as well as at those of the Royal Ag. Societies of England and Ireland and the Highland Society of Scotland, and to expend the remainder of the summer in inspecting with some minuteness the modes of cultivation practiced by the best practical farmers in various parts of the three kingdoms. The results of his observation will be communicated from time to time through our columns, and, while it forms no part of his contemplated plan to undertake commissions of any kind, his services as far as consistent with other engagements, will be cheerfully placed at the disposition of any of our friends who may desire to avail themselves incidentally of the opportunity thus offered, *while any information from them tending to further the objects of the journey*, and to place within his knowledge and access either persons, places, or establishments, whose acquaintance would be of value and which might be otherwise overlooked in the arrangement of his time, *will be most thankfully received and acted upon* Communications should reach us by the middle of April.

French Potatoes.—Attention is invited to the advertisement of B. K. Bliss of Springfield, Mass., who it will be seen offers a great variety of potatoes raised from tubers grown in France, and specially selected for this country. The *Springfield Republican* says:

"Those who attended the late Hampden County Fair will remember the exhibition made by B. K. Bliss of this city, of one hundred and five varieties of potatoes, raised by him, from tubers imported from France. The same specimens were exhibited in Hartford, at the Connecticut State Fair, and elicited much admiration and inquiry. The tubers for these specimens were sent to him by Vilmorin, Andrieux & Co. of Paris, seedsmen to the Imperial Agricultural Society, and embraced all the popular varieties cultivated in France, and many not fully introduced. Some of them have shown themselves to be very prolific, and very fine in the eating; and we suggest to farmers in this region that they may possibly, and very probably, in fact, get something out of these potatoes of great value to the farming community, independent of the advantages to be derived from a simple change of seed."

Prices of Fruit in Oregon.—Extract of a letter from a subscriber at Oregon City, dated Jan. 8, 1859—"My last my shipment of apples to San Francisco California, netted me eighteen cents per lb. They are now 27 cents per lb.—worth here in Oregon, 20 cts.—retail at 25 to 40 cents. Apples exported this year will bring into Oregon not less than one million of dollars. We had one snow three inches deep—lay on the ground one week—it is now frosty nights with clear, thawy days. M. B."

☞ Messrs. C. & W. McCammon, the well known Tile makers of this city, have issued a Price-card for 1859, in which they reduce their rates materially on several of the most frequently called for sizes. They will be glad to answer any inquiries on the subject of Draining, and offer their advice, where it is desired, as to the practical performance of the operation.

FIELD AND GARDEN SEEDS

from reliable growers.

Agricultural and Horticultural Implements of the most approved patterns.

GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., New-York City.

COMMERCIAL AGENTS WANTED.

Able and honest men from New-England or New-York. A. W. HARRISON, Philadelphia, Pa. feb.10-6*

AGRICULTURAL IMPLEMENTS

AT MANUFACTURER'S PRICES,

Consisting of Endless Chain Horse Powers and Threshers, Excelsior Fan Mills, Corn Shellers, Harrows, Straw and Hay Cutters, Cider Mills and Presses, Churns, Cultivators, Iron and Wood Beam Plows, &c., &c. Send for a Circular giving prices. For sale by A. LONGETT,
Mar 1—m3t | mar 24—w6t No. 34 Cliff-st., New-York

NEISHWITZ' MOWER AND REAPER.

Buckeye Mower and Reaper.

For sale by A. LONGETT,
Mar. 1—m3t ' ap. 7—w4t 34 Cliff-st., New-York.

ELLWANGER & BARRY'S old established "*Mt. Hope Nurseries,*" Rochester, N. Y. Orders received at *Agricultural Depot*, 100 Murray-st., New-York.
Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

EUROPEAN POTATOES.—

The subscriber received last spring from the Seedsmen to the Imperial Agricultural Society of France, a collection of *One Hundred varieties of Patatoes*, selected as the *best* from upwards of *Five Hundred varieties*, collected from all parts of the world, and cultivated by that Society for the purpose of testing their quality.

This collection has been carefully cultivated during the past season, and specimens exhibited at some of our State and County Fairs, which have attracted much attention. From these, *fifty varieties* have been selected, which for their productiveness, fine flavor, and freedom from disease, (no signs of rot appearing in any of them,) can be recommended as every way desirable for general cultivation. A large proportion of the remaining varieties promise well, but he has thought it desirable to give them another year's trial before sending out. For the purpose of introducing as extensively as possible, he has put them up in collections as follows, which can be sent by *Express* to any part of the country:

50 varieties, 3 potatoes each, each sort distinctly labelled, ...	$5 00
20 varieties, 10 potatoes each, distinctly labelled, ...	4.00
10 " 20 " " " "	3 00

All orders must be accompanied with the cash.

Address B. K. BLISS,
Mar17—weow4tm1t Springfield, Mass.

THE LODI MANUFACTURING CO.

Poudrette! Poudrette!!

Is offered for sale by the subscribers, wholesale and retail, in lots to suit purchasers. This article has been now in use for over 17 years, and is the most popular manure for corn and early vegetables, in market.

It is quick and powerful, and can be put in direct contact with the seed without injury. Price $1 50 per barrel, delivered on board of vessel, for any quantity over 6 barrels. $2.06 for a single barrel.

CERTIFICATES.

The undersigned have used the Poudrette of the Lodi Manufacturing Co., for the number of years, and upon the crops set opposite to their names, and can recommend it as a cheap, and most excellent fertilizer.

Charles Smith, Bloomfield,	N. J.,	10 years,	corn.	
Cyrus Canfield, Caldwell,	"	10 "	"	
John Squires. Livingston,	"	10 do.	and garden	truck.
A. J Jacobus, "	"	17 do.	"	"
H W. Harrison, Caldwell,	"	10 do.	"	"
J. Simpson, Franklin,	"	8 do.	"	"
Hiram Farnham. Livingston,	"	15 do.	"	"
J. A. Harrison, Orange,	"	10 do.	"	"
B. F. Lum, Chatham,	"	15 do.	"	"

A pamphlet containing certificates of practical farmers in all parts of the United States, with every information and direction for use, will be mailed to any one sending the address. GRIFFING BROTHER & CO.,
General Agents for the Company,
North River Ag. Warehouse, 60 Cortlandt-st, N.York.

TO PLANTERS AND FARMERS.

CORIA.

This fertilizer is composed of dead animals, leather scraps, old boots and shoes, (gathered in cities,) dissolved by a new and ingenious process, into a liquid of the consistency of molasses; to this is added night-soil, blood, and ground bones. The whole is then dried and ground.

It is offered for sale on the strength of the well-known fertilizing qualities entering into its composition. Circulars, with directions for use and analysis, will be forwarded on application to the subscribers—agents for the Lodi Manufacturing Co. , GRIFFING BROTHER & CO.,
North River Agricultural Warehouse,
March 1—m3t No. 60 Cortlandt-st., New-York.

TRANT'S EVERGREEN PEA.—

The subscriber now offers to his friends this new and valuable Pea. It bears the following description:

"Trant's Evergreen Peas can be planted as early as the ground will admit of cultivation, and also very late, so that a family can have a supply all the season. Plant from six to eight inches apart, brush eight feet high; they are productive, cook easy, and have been pronounced unequaled for their delicious flavor by all who have tried them." "At the State Fair held at Buffalo, (at which they were awarded a premium,) a gardener from Canada offered Mr. Trant five dollars for one gallon! This is mentioned merely to show how highly they are appreciated. Packages twenty-five cents, (by mail forty-six cents,) containing sufficient for one family.

WILLIAM THORBURN, Seedsman,
March 10—w3tm1t 492 Broadway, Albany. N. Y.

FOR SALE.—100 BARRELS PURE *PRINCE ALBERT POTATOES.*

50 bushels Rough Purple Chili Potatoes.
50 bushels Peach Blow Potatoes.
10 bushels New-Hartford Potatoes.
10 bushels Garnet Chili Potatoes.

Warranted Genuine, and have never been known to rot in any soil. Price $5 per barrel or $2 per bushel.

F. W. NOBLE,
Mar 1—m3t Easton, Pa.

MAPES' NITROGENIZED SUPERPHOSphate of Lime

—also first quality of Peruvian Guano, for sale at *Agricultural Depot*, 100 Murray-st., New-York.
Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

CHEAP HOMES FOR ALL.—

Persons seeking a new home, can do well by coming to Virginia. Land is cheap; climate mild and healthy For any information desired, concerning locations, psices, &c., address L. H. REYNOLDS, Maple Valley, Prince William Co., Va. Mar17—w3tm1t

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PLATTSBURGH NURSERIES.—

Hardy Northern Fruit Trees.

Apple Trees—Standards and Dwarfs, all choice kinds.
Pear Trees—Standard and Dwarfs, all choice kinds.
Plums, Cherries, Raspberries, Gooseberries and Currants—all the best sorts.
New-Rochelle Blackberries—fine plants.
GRAPES.—The following new choice kinds at the lowest rates: Delaware, Rebecca, Diana, Marion, Hartford Prolific, Concord, and Northern Muscadine; and all the old sorts in abundance.
ROSES.—Perpetual, Moss, Climbing and other choice kinds. *Ornamental Trees and Shrubs*, Herbaceous Plants, &c., &c.

Our new Descriptive and Priced Catalogue will be sent on application. JOHN W. BAILEY & SON,
Mar17—w3tm1t Plattsburgh, N. Y.

DRAIN AND ROOF TILE MACHINE.—

The subscriber is Patentee and Manufacturer of the best Machine extant, for making Drain and Roof Tile, and Hollow and Solid Brick. The Machine grinds the clay, moulds it into Tile, Bricks, &c., and delivers them on to the drying boards, at the same operation, by horse or other power. Also the best Drying Apparatus known. For further particulars, address F. M. MATTICE,
Mar3—weow3tm1t Buffalo, N. Y.

D. L. HALSEY, DEALER IN *CRANBERRY PLANTS*,

Victory, Cayuga County, N. Y.
☞ PRICE—$1 per Hundred—$6 per Thousand.
Feb. 24—weow6tm2t

SHORT-HORN HERD AT AUCTION.

Having sold my farm at Chestnut Ridge, Dutchess county, N. Y., I will offer for sale at auction, my entire Herd of Short Horned Cattle, consisting of about 35 head superior animals. Among them will be the unrivalled Bull "*Highflyer*," 578; also, stock sired by him, as well as the "*Earl of Warwick*," 465. The sale will take place at Dover Plains, on the New-York and Harlem Rail Road, on the 10th day of May next, at 12 o'clock.

Catalogues of Pedigrees may be had after the 10th day of March, at the offices of the *American Agriculturist*, New-York; *Country Gentleman*, Albany; *Ohio Farmer*, Cleveland; *Boston Cultivator*, and of the subscriber,

SAMUEL T. TABER,
Mineola, Queens Co., N. Y.

P. S. No animals will be disposed of before the sale at auction. Feb. 24—w10tm2t

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GARDEN, FIELD, FLOWER, *AND FRUIT SEEDS.*

The subscriber offers a full assortment of the above Seeds, of the growth of 1858, of the very best qualities, and in addition to all the Standard varieties, will be found many novelties. Orders by mail attended to immediately. Wholesale and Retail.

A CATALOGUE, containing full lists of Seeds and Prices, furnished on application.

SEED POTATOES of all choice kinds.

SPRING WHEAT, SPRING RYE, SPRING BARLEY.

OATS of superior quality.

GRASS AND CLOVER SEEDS.—Honeyblade or Hungarian, Green, fine mixed Lawn, Blue, Orchard, Timothy, Red Top, &c.; Red Clover, White Dutch, Luzerne, &c.

PEABODY'S STRAWBERRY PLANTS—$3 per 100—$2 for 50. Also *Wilson's*, *Hovey's*, and all other popular varieties.

Lawton Blackberry Plants.
Asparagus and Rhubarb Roots, &c., &c., &c.

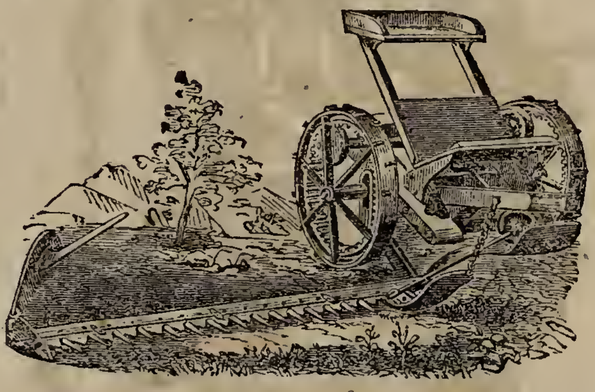
R. L. ALLEN,
189 Water-st., New-York.

FARM AND GARDEN IMPLEMENTS of every description, and of the best and latest improvements.

Also *Peruvian Guano*, *Dried Blood and Wool*, *Bone Dust*, *Superphosphate of Lime*, and all other improved FERTILIZERS in large and small quantities.
Mar3—weow5tm2t

WOOD'S MOWER.—

Patented February 22d, 1859.



During the six years I have been engaged in the manufacture of the Manny Combined Reaper and Mower, I have given much thought and attention to the construction of what I foresaw would be a great want of the Farmers—a lighter and cheaper machine expressly for mowing, than had yet been made.

And now, after the most thorough and repeated experiments and tests in every variety of field, and in all kinds and in every condition of grass, I am prepared with entire confidence to offer to the farmers and dealers of the United States, the great *desideratum* in this department of Agricultural labor-saving machines—a Mower, superior in its capacity for good work to any hitherto introduced, of easy draft, light, cheap, and durable.

This machine I now offer as my latest invention, to meet a special want of farmers, and to place within the reach of all, a Mower that for practical working, cheapness and simplicity, will be without a rival.

I build Two-Horse and One-Horse Mowers. The Two-Horse Mower weighs 425 lbs., and cuts a swath four feet wide (or more if specially ordered.) The One-Horse Mower weighs 30 lbs. less, (395 lbs.,) and cuts a swath three and a-half feet wide.

For a more full description of the Mower, reference is made to my Pamphlets, which will be furnished on application. With each machine will be furnished two extra guards, two extra sections, one wrench and oil-can.

Warranted capable of cutting ten acres of grass per day in a workmanlike manner.

Price of Two-Horse Mower,.................	$80
" One-Horse Mower, ...	70

Delivered here on the cars.

I continue as heretofore, and with greater success than at any previous time, the manufacture and sale of "Manny's Patent Combined Reaper and Mower with Wood's Improvement." WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

Agricultural Books,

For sale at the office of the Country Gentleman.

OPPOSITION TO HAND LABOR.—D. W. SHARES' Agricultural Implements for sale—Horse-Hoeing Machine, Seed Planter, and Coulter Harrow, the greatest labor-saving implements of the day, sent to any part of the country, except on territory that is sold.

☞ Patent Rights for Sale.

For further particulars address the subscriber, who will send Circulars or any information desired, free to any part of the United States. D. W. SHARES,

Mar24—w&m1t Hamden, Conn.

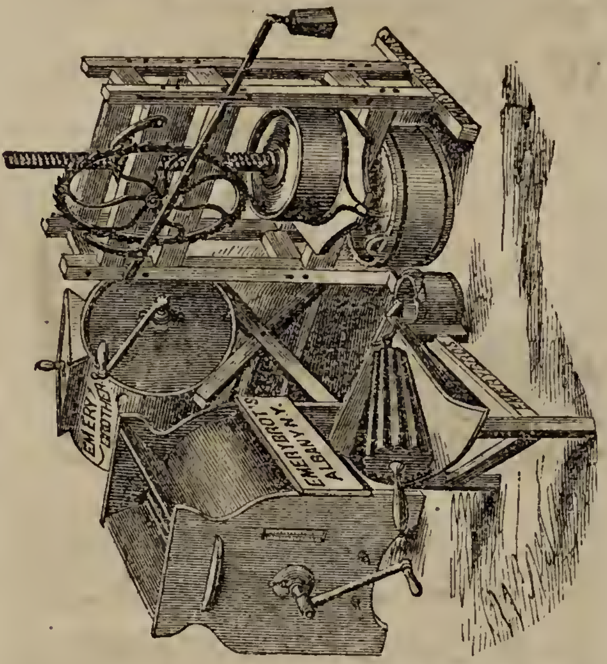
NEW AND CHEAP FERTILIZER.—

CASTOR PUMMACE.

A valuable *organic* (vegetable) manure, analyzed by Prof. Samuel W. Johnson of Yale College, and commended by him. It is PUMMACE left after pressing the oil from the Castor Seed, and in India and England bears a high value as a fertilizer. It will be sold at $12 to $16 per ton, according to quality—at which rate it is the cheapest fertilizer in the market. The analysis and remarks of Prof. Johnson will be sent to any address on application; samples of the article may also be obtained if required.

No charge for packages, and in lots of Ten Tons, delivered free of cartage in this city. Manufactured and sold by H. J. BAKER & BRO.,

Mar24—w8tm3t 142 Water-st., New-York.



DAIRY IMPLEMENTS,

MANUFACTURED BY

EMERY BROTHERS,

PROPRIETORS OF THE

ALBANY AGRICULT'L WORKS,

62 & 64 State Street,

ALBANY, N. Y.

FROM a large experience, and the many trials with almost every Churn which has claimed the attention of the public for the last thirty years, as well as repeated experiments and microscopic examinations of milk, cream and butter, sweet and sour cream or milk, and at all temperatures from 50° to 80° Fahrenheit, the proprietors are satisfied that the process of churning is simply mechanical, and the only requirement is the proper temperature, and butter-yielding milk or cream.

Probably no process known is more correct than that of the common Dash Churn. The specific gravity of the particles of butter is much less than that of the milk, and they instantly rise to the surface, and each stroke of the dasher downwards, carries the particles with a compressing force against others below them—the milk itself forming the fulcrum. These particles, when of the proper temperature (62° to 65°) to receive and retain form, become butter by the simple process of compressing and expelling the milky fluid from between them, and the attraction of cohesion between the particles themselves.

As the Crank Churn is more in consonance with the best application of the human muscular system, they have come into very general use for hand power, throughout the butter-making sections. The most complete are those whose beaters and blades conform most nearly in their action to the common Dash Churn.

Those constructed with double metallic cylinders for holding the cream inside, and regulating the temperature by hot or cold water between the cylinders—also with a thermometer set in the end of the churn, in contact with the cream, showing its temperature at all times, are considered the most desirable, and are shown on left of the plate at the head of this article, and is known as

CROWELL'S PATENT THERMOMETER CHURN.

Prices and Sizes as follows:

No. 1—1 to 3 cows, contains 4 gallons,	$ 3 50
No. 2—3 to 5 cows, contains 6 gallons,	4.00
No. 3—5 to 8 cows, contains 9 gallons,	4.50
No. 4—8 to 16 cows, contains 12 gallons,	5.00
No. 5—16 to 24 cows, contains 15 gallons,	6.00
No. 6—24 or more cows, (2 cranks,) 30 gallons,	12.00

WOOD CYLINDER CHURN.

This is seen in the middle back-ground of the plate, and is similar in its operation and use as the Churn last described. It is a simple wood cylinder with crank shaft and beaters, and is perhaps in more general use than any other Crank Churn. It is the cheapest and most simple, and with the use of a thermometer to get the cream at a proper temperature, before it is put into the churn, the farmer can churn with it as easy and well as with the Thermometer Churn. Their prices and sizes are as follows, for the four sizes now made:

No. 2—2 to 5 cows, 6 gallons,	$2.25
No. 3—5 to 8 cows, 9 gallons,	2 75
No. 4—8 to 16 cows. 12 gallons,	3.25
No. 5 -16 to 24 cows, 15 gallons,	4.00

BUTTER-WORKER.

Much depends on the manner of working the butter after it is churned, as this is but a continuation of the process of churning, and consists chiefly in expelling the remaining milk from among the particles of butter in the mass, as it is taken from the churn, which, if not thoroughly done, will in time become rancid, and produce what is termed strong butter, and which depreciates it in price from 10 to 30 per cent. in market.

A good Butter-Worker is shown in the middle foreground, and is made of a quadrant-formed hard-wood table, upon three legs, with ledges on the two straight sides, coming nearly together at the square corner. The leg at this corner is a little lower than the other two, which causes the milk and water to drain off into a pail or tub for the purpose. Over this table is a fluted conical cylinder, with a hole through its center for a handle to pass through, and attach to an iron staple at the lower end. It is operated by rolling it backward and forward over the whole table, where the butter is kneaded over and over as a baker kneads his dough. The salting and seasoning is also done with the same machine. This is also very useful for bread-making purposes when desired.

Price, all wood, ... $7:00 | Price, with marble slab, $15

CHEESE PRESSES.

The requisites of a good Cheese Press are a continuous and uniform pressure upon the cheese during the pressing process, and the practicability of adapting it to the required force for cheeses of all sizes, in such a manner that they shall be uniformly pressed. The Press shown in the illustration at the right hand, is one of the most efficient, cheap, convenient, simple and portable ever made, and is in very general use in several of the largest cheese-making counties in this State. The illustration is too plain to need any description. It is a simple rack and pinion—the rack extending upward from the follower, and passes the pinion which is inside the frame; the pinion is fitted upon the same shaft with the large ratchet-wheel upon the side of the frame. One end of the iron lever which passes across the Press, is fastened upon a fulcrum bolt at one side of the Press, and passes through an iron guide, and receives the necessary weight upon the extended end. Upon the iron lever near the fulcrum bolt, is attached a hook or pall, which, on raising the weight end of the lever, catches hold of the teeth on the large wheel, and on letting go the lever, the hook pulls upon the large wheel, and by it the pinion is turned in the rack, producing the downward pressure, which continues until the lever rests upon the guide, when the attendant simply raises the lever and weight again, and the hook takes hold of other teeth in the wheel. The whole Press weighs about 150 pounds, and is worth $12, and suitable for a cheese of 50 to 100 lbs. For further particulars, address

EMERY BROTHERS,
62 & 64 State-st., Albany, N. Y.

☞ Catalogues furnished gratis, on receipt of six cents to prepay postage on same. Mar17—w&m1t

SEED CORN.—I have about 100 bushels of Selected Seed Corn, of the yellow eight-rowed red blaze variety, one of the best and handsomest varieties in cultivation, which I will enclose in sacks and deliver to express at Port Byron, for $1.50 per 60 lbs. Address GEO. R. LOCKWOOD,
Mar17—w1tm1tMay1—w1t Victory, Cayuga Co., N. Y.

EARLY PARIS CAULIFLOWER, and Peruvian Flat Dutch Cabbage—the best varieties known; both sure to head. Each 12½ cents per package by mail. Address "RURAL EMPIRE CLUB," Macedon Center, Wayne Co., N. Y. Mar10—w&mtf

WM. R. PRINCE & CO., Flushing, N. Y., will send Priced Catalogues of any department of their Nurseries to applicants who enclose stamps, including a recent Supplement Circular of Fruit Trees and Small Fruits, at reduced rates, and 150 varieties of Native Grapes; as well as their usual Catalogues of Trees, Plants, Seeds, Bulbs, &c. Mar17—w&m1t

NOVELTIES!—NOVELTIES!!

Japan Apple-Pie Melon, per packet 25 cents—by mail 28 cents.

Bradford Watermelon, per packet, 25 cents—by mail, 28 cents.

Pomarian Watermelon, per packet, 10 cents—by mail, 13 cents.

The True Hubbard Squash, (from J. J. H. Gregory, the original introducer,) per packet 25 cts.—by mail 28 cts.

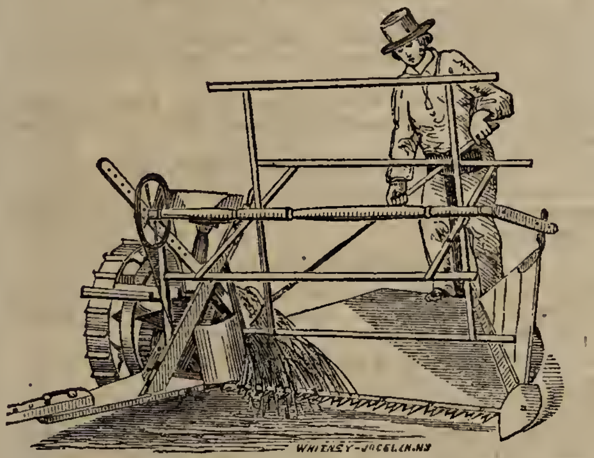
Trant's Evergreen Pea, per packet 25 cents—by mail 46 cents.

For sale by WILLIAM THORBURN, Seedsman,
Mar17—w3tm1t 492 Broadway, Albany, N. Y.

MANNY'S COMBINED REAPER AND MOWER,

WITH WOOD'S IMPROVEMENT,

For the Harvest of 1859.



The subscriber begs to inform the public that he continues to manufacture this popular machine, and pledges himself to produce an implement that will fully sustain its former reputation, as the best combined machine yet introduced, and inferior to none, either as a Reaper or Mower.

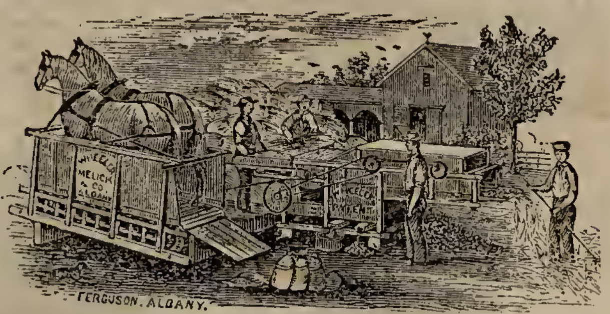
It has had a steady and increasing popularity from the first achieving a complete success in the first important trial at Geneva in 1852. It carried off the highest honors at the great National Field Trial at Syracuse in 1857; and amidst all the competition and trials of 1858, came out with more and better established points of excellence than ever before.

The general principles peculiar to this machine, and upon which it is constructed, have proved so successful that there has been no attempt to change them.

The main effort during the last year has been to improve its mechanical construction, to make it stronger and more durable, and sustain its reputation as the leading and most acceptable machine to the largest class of farmers in the country.

Warranted capable of cutting from 10 to 15 acres of grass or grain per day, in a workmanlike manner.

Price of Machine as heretofore, varies according to width of cut, and its adaptation in size and strength to different sections of the country, from $125 to $150, delivered here on the cars. WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.


FERGUSON. ALBANY.

WHEELER, MELICK & CO.,

PROPRIETORS

N. Y. State Agricultural Works,

Manufacturers of Endless Chain Railway Horse Powers, and Farmer's and Planter's Machinery for Horse Power use, and owners of the Patents on, and principal makers of the following valuable Machines.

Wheeler's Patent Double Horse Power

AND

Improved Combined Thresher & Winnower.

(Shown in the Cut.)

Our first Combined Thresher and Winnower was invented and made in 1851. Continued experiments resulted in 1857, in the present

Wheeler's Improved Patent Combined Thresher and Winnower.

This Machine is a model of simplicity and compactness, and is made in the most substantial manner, so that its durability equals its efficiency and perfection of work. Its capacity, under ordinary circumstances, has been from 125 to 175 bushels of wheat, and from 200 to 300 bushels of oats per day. It works all other kinds of grain equally well, and also threshes and cleans rice, and timothy seed. Price $245.

Wheeler's Patent Single Horse Power

AND

Overshot Thresher with Vibrating Separator.

This is a One-Horse Machine, adapted to the wants of medium and small grain-growers. It separates grain and chaff from the straw, and threshes from 75 to 100 bushels of wheat, or twice as many oats per day without changing horses—by a change, nearly double the quantity may be threshed. Price $128.

Wheeler's Patent Double Horse Power

AND

Overshot Thresher with Vibrating Separator.

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machine, and is adapted to the wants of large and medium grain-growers, and persons who make a business of threshing. Price $160.

Also, Circular and Cross-Cut Sawing Machines, Clover Hullers, Feed Cutters, Mowers and Reapers, Horse Rakes, and other Farming Machines.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other Machines that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use—either are sold separately.

☞ To persons wishing more information and applying by mail, we will forward a Circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines, in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery 24 years, and have had longer, larger, and more extended and successful experience than any other house.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

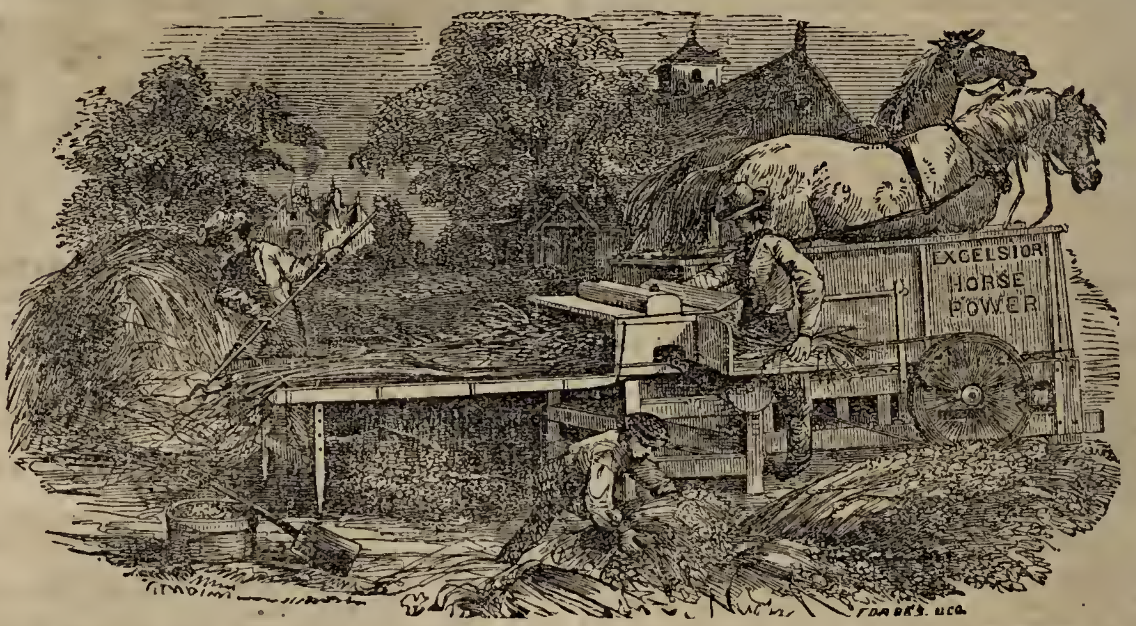
☞ Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity; and Machines, securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,
Mar17—w2tm1t Albany, N. Y.

MAPES' CELEBRATED ONE-HORSE Steel Subsoil Plow, for deep cultivation of crops during their growth. Also the same pattern, *three larger sizes*, for deep subsoil plowing For sale at Agricultural Depot, 100 Murray-st., New-York.

Mar.1—m1w2t | ap1—m1w2t HENRY F. DIBBLEE.

HUNGARIAN GRASS SEED—the *real genuine* "Honeyblade" and all; also pure CHINESE SUGAR CANE SEED, from Mr. Peters of Atlanta, Ga.—2 oz. to 4 oz. samples—free to all who ask. Address "RURAL EMPIRE CLUB," Macedon Center, N. Y., and enclose stamps for postage. Mar10—w&mtf



EXCELSIOR AGRICULTURAL WORKS,

TIVOLI HOLLOW, ALBANY, N. Y.,

RICHARD H. PEASE, Proprietor.

I would call the attention of your readers to the following articles of my manufacture, being satisfied that they are, each and all of them, the very best and cheapest labor-saving machines ever offered to the public. I use none but the best material, and employ as experienced workmen as can be had; hence my work is unsurpassed, both in utility and durability. All I ask is that you should make a trial of any of my machines, and I am confident of giving satisfaction. The Excelsior

CHANGEABLE RAILWAY HORSE POWERS,

Have long been acknowledged to be the best, most durable, and easiest working machines in use. They have invariably taken the First Premium at every test trial where they have been exhibited, both at the United States and State and County Fairs. Price $116.

CADY'S IMPROVED LEVER HORSE POWER,

To be driven by 2 or 4 horses, is a first-rate machine for heavy work, as it combines durability and cheapness, and has a variety of motions with same speed of horses. Price $60.

Excelsior Changeable Thresher and Separator,

For threshing and separating any kind of grain, has stood many severe tests with uniform success, and can be run by wind, steam, or horse power. With my One-Horse Power, it is capable of threshing from 100 to 175 bushels of wheat, rye, barley or buckwheat, or from 175 to 200 bushels of oats, in one day; and with the Two-Horse Power and one extra hand, nearly double the work can be performed. Price, Single, $37; Double, $40.

THRESHER AND CLEANER COMBINED,

To be run by the Two-Horse Power, are warranted to clean the grain thoroughly. They are quite compact, occupying but little more room than the Thresher, and are highly recommended by those using them. Price $125.

Excelsior Circular and Cross-Cut Saw Combined,

(Cady's Patent,) can be attached to any horse, water, or steam power, with a belt, and is capable of performing more work than any machine of the kind in use. Over 100 of these machines were sold in one State last year, and all worked to a charm. Price $65.

EXCELSIOR CIRCULAR SAW MILL,

For sawing cord wood, stove wood, &c., has been in extensive use on the railroads in the country, and also by many farmers, and is just the thing for the purpose. With a One-Horse Power, it can saw from 20 to 25 cords of wood in one day, and with a Two-Horse Power and an extra man, much more. Price $37.

Slitting Table and Saw, for fence stuff, fitted to above machine, at the trifling expense of $7. Is very convenient for farm use.

EXCELSIOR CROSS-CUT SAW-MILL,

To be run by the Excelsior Horse Power. Is capable of sawing a log 4 feet in diameter. Its cheapness and facility of using, recommend it to general use. Price $25.

EXCELSIOR CLOVER HULLER.

This little machine is capable of hulling from 5 to 10 bushels of seed in a day, without injuring or wasting it in the least. Price $32.

EXCELSIOR CIDER AND WINE MILL,

(Krauser's Patent,) is highly recommended as a great improvement over other portable mills. It grates the apples into a fine pomace, which falls into the tub, which is then shoved under the Press, where it can be subjected to a pressure of nearly 10 tons, thus obtaining every particle of juice. Price $45.

EXCELSIOR DOG POWER,

For churning, turning grindstone, &c., is got up in a most substantial manner, all the shafting and rollers being of iron. Is easily attached to any churn, and is a great saver of time. Price $18.

Shares' Patent Coulter Harrow & Grain Coverer.

This machine is a great improvement on the Scotch or drag harrow, and it saves once plowing. It lifts, loosens, and pulverizes the soil, and makes the ground as smooth as could be made by raking. Price $15.

Share's Patent Hilling, Hoeing & Covering Machines

For covering, cultivating, and hoeing potatoes and corn They do away entirely with the hoe, and by tilling and cultivating all parts equally, they insure a much larger crop.

Orders respectfully solicited, and promptly attended to, for any of the above-mentioned machines, which are all warranted to give satisfaction, or they can be returned at my expense.

All descriptions of Agricultural Machinery built to order, in the best manner, at short notice.

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Mar17—w&m1t Excelsior Ag. Works, Albany, N. Y.

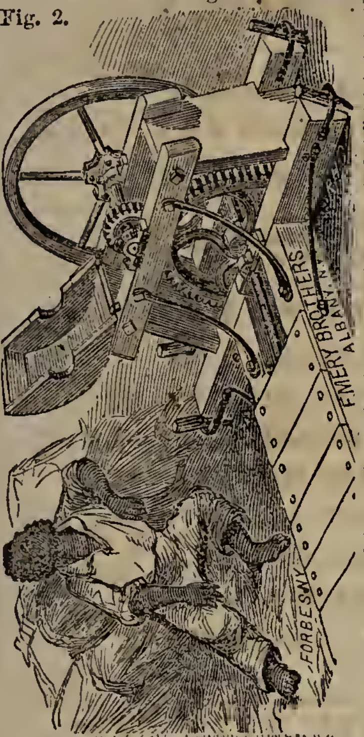

Fig. 2.

EMERY BROTHERS
ALBANY, N.Y.
FORBES N.Y.
R.H.C.

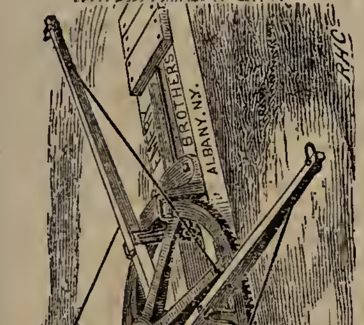

Fig 1.

BROTHERS
ALBANY, N.Y.
FORBES N.Y.

LEVER HORSE POWERS,

MANUFACTURED BY

EMERY BROTHERS

PROPRIETORS OF THE

ALBANY AGRICULT'L WORKS,

62 & 64 State Street,

ALBANY, N. Y.

THERE is much diversity of opinion among men who follow threshing as a business, as well as Farmers and Horse Power manufacturers, concerning the relative economy and practicability of the Lever or Sweep Powers and the Endless Railway or Gravity Powers This can only be settled by the analysis of the two principles, and the different circumstances attending their uses.

With the Revolving Platform of Emery's Patent Railway Power, the force of the horses is always applied tangentially, or at right angles to the radius of the reels or drums, and at their periphery ; and consequently communicating the entire force through the reels or drums, to the machines intended to be driven, and without any loss by any indirect application. Not so, however, with the Levers of a Sweep Power. The force of the horses being applied to the ends of the levers, and their advance being in a circular direction, the application is not in a right but in an acute angular direction with the lever—the degree of acuteness depending upon the various lengths of the levers. It is self-evident, that whatever the difference of the angle of application of the force of the lever may be less than 90°, or a right angle, just such a ratio of loss of effective force is the consequence, and the shorter the levers, the more acute this angle of application, and greater the loss. The proprietors have carefully computed the relative force and loss, with four levers of different lengths, as shown by the following table, and have computed the length of a lever required to perform the same work with the same force, were it applied tangentially, as in the Endless Railway Power.

Length of Levers.	Angle of application.	Length required if applied at right angles.	Loss by acute over right angle application.
14 feet.	65°	12 feet 6 inches.	9½ per cent.
12 "	60	10 " 5 "	15½ "
10 "	54	8 "	25 "
8 "	42	5 " 2½ "	54 "

The operation of the machines upon these two principles, show results which prove conclusively the accuracy of the foregoing table, as will be seen from the following table of the relative cost and results of operating them ; and supposing the farmer to own both kinds of Powers and the horses, and not charging anything for interest or wear of either, which, if computed, would be against the Lever Power.

Emery's Patent Endless R. Road Power. Average result for 10 hours.		Emery's Patent Lever or Sweep Horse Power. Average result for 10 hours.	
Four men to attend, $1,	$4 00	Ten men at $1,-------	$10.00
Two horses, 50c each,	1.00	Eight horses, 50 cts.,-	4.00
Boarding men and horses, 37½c. each,------	2.25	Boarding men and horses, 37½c.,-------	6.75
	$7.25		$20.75
Average amount of wheat. 200 bu.; cost for threshing, 3 cts. 6 mills per bushel.		Average amount of wheat, 300 bu.; cost for threshing, 6 cts. 9 mills per bushel.	

Making the work by the Lever Power cost 92 per cent. more per bushel than with the Railway Power.

Notwithstanding this disparaging show of the two machines, the Lever Power has the advantage of increasing the number of horses almost indefinitely, and by so doing can aggregate a greater force, and perform more work in a given time, and with horses and mules which would be unfit from their small size, to operate any Two-Horse Railway Power to advantage ; and a Railway Power for more than two horses, is impracticable and worthless, and from its double cost, cumbrousness and weight, can never be substituted for the Lever Powers.

Therefore, where time is the greatest consideration in getting out a crop, or horses, mules, &c. unfit for the Railway Power, the Lever Power becomes a necessity, and always will be used under such circumstances. The annexed cuts represent Emery's latest improved Lever Power, as adapted for driving all kinds of machines made at the Albany Agricultural Works. Fig. 1 shows the master wheel with the levers attached, and the pinion, and a portion of the ground shaft and timbers. Fig. 2 shows the other end of the said shaft and timbers, with the jack and band wheel attached, for driving directly by the band any machines desired. The timbers and shaft are planked over where the horses cross them, thus avoiding injury to the horses and machine. This band wheel is much preferred over the horizontal band wheel which most manufacturers are selling, as no intermediate guide rollers and pulleys are required for twisting and changing the direction of the band, to apply it to the several machines.

Price of Power, with Levers, Band Wheel, &c., complete, ... $125.00
Price of Power, without Levers, ... 118.00

For full description, prices, terms, and warranty, see Illuminated Catalogue just published, which will be furnished gratis to all applicants, on receipt of six cents to prepay postage on same. EMERY BROTHERS,
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PERUVIAN GUANO.—No. 1 Peruvian Guano, Government Brand and Weight, direct from the Peruvian Agents, at the lowest market price, in quantities to suit purchasers. Send for a Circular. A. LONGETT,
Mar 1—w&m3ms 34 Cliff-st., New-York.

NO. 1 PERUVIAN GUANO,

"Hoyt's" Superphosphate of Lime,
Bone Dust, Plaster,
Poudrette, Tafeu, &c.

The above Fertilizers *warranted* pure, and sold at the lowest market price.

GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., N. Y. City.

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The Steamer KNICKERBOCKER, Capt. W. B. Nelson, Mondays, Wednesdays, and Fridays.
The Steamer HERO, Capt. J. W. Hancox, Tuesdays, Thursdays, and Sundays.

Tickets can be had at the office on the wharf, for all the stations on the New-York Central Railroad, and the principal cities in the Western States and Canada.

Baggage checked to all points, free of charge.

Freight carried at reduced rates and forwarded promptly. ELI HUNT, Agent.
New-York, March 10, 1859—w&m9ms

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BERKSHIRE PIGS.—I have now another choice lot for sale—$5 at 6 weeks.
Mar31—w6tm2t WM. J. PETTEE, Lakeville, Ct.

FLOWER SEEDS BY MAIL.—
Twenty-five choice varieties for $1.
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One Hundred choice varieties for $4.
And postage paid. For sale by
WILLIAM THORBURN, Seedsman,
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OSIER WILLOW CUTTINGS. Having received numerous applications for cuttings of the *Salix Purpurea*, *S. Triandria*, and *S. Grantiana*, from the readers of a communication in this paper, giving an account of his success in raising them, the subscriber will send by mail, prepaid, to any address, a sufficient quantity to be planted with entire success, for *One Dollar*.
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EXCELSIOR POTATOES, the best early variety, at $3.50 per barrel.
Can be obtained by addressing
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SHARES' IMPLEMENTS.
COULTER HARROWS, $15
COULTER HARROWS, $15
HOEING AND HILLING MACHINES, $10
HOEING AND HILLING MACHINES, $10
SOLD BY PEASE & EGGLESTON,
SOLD BY PEASE & EGGLESTON,
ALBANY, N. Y.
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THOROUGH-BRED AYRSHIRES.—I offer for sale ten young Bulls bred from the best families of this breed—also the prize cow Jessie, and one or two others. Also a young DEVON BULL, sire imported "Comet," and two or three females with Herd-Book pedigrees. ALFRED M. TREDWELL,
Madison, Morris County, New Jersey.
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THE PARALLEL LEVER HAY PRESS.

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Dealers furnished as heretofore.

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Patentee and Manufacturer,
OFFICE—No. 68 Liberty Street, Albany, New-York.
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Of all kinds, for sale at the Office of the Co. Gentleman

THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD *To Improve the Soil and the Mind.* SERIES

VOL. VII. ALBANY, MAY, 1859. No. V.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS.
ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

PRICE FIFTY CENTS A YEAR.

THE CULTIVATOR has been published twenty-five years. A NEW SERIES was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at $1.00 each.

The same publishers issue "THE COUNTRY GENTLEMAN,' a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 a year. They also publish

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS—144 pp. 12 mo. — price 25 cents — $2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price $1.00—sent by mail post-paid.

The Growth of Plants.

From the first movement of the germ in the seed the farmer commits to the soil, till the full maturity of the crop it produces, is one continuous series of chemical changes, combinations and effects; and all these changes and combinations are regulated and controlled by those physiological laws that were established "in the beginning." Animals and plants, from infancy to their full growth, are gradually made up of atomic accumulations and accretions. Day by day the processes of absorption, assimilation and enlargement go on; and a few months of favorable weather suffices to grow from a grain of Indian corn, a plant in all its parts a thousand fold heavier than the parent seed.

The atoms of which the plant has been built up, have always, each of them, existed since the creation, possessed of the properties then conferred on them. Those elementary substances that compose our farm products, in themselves are indestructible and unchangeable; yet they have been endowed with the quality of combining in an infinity of ways, and producing an endless variety of products, but upon the decomposition of these products, by the slow process of natural decay, or by the more active action of fire, they are resolved into their approximate or ultimate elements. But by the action of decay, or that of fire, these elements are not lost, for there is no such word as *lost* in the whole vocabulary of nature.

The living plant cannot change the character of the atoms presented to it—it flourishes or dies, according as they are food or poison; it can but select those proper for its growth; and the growth of the plant, whether luxuriant or stinted, (other conditions being equal,) will be according to the accumulation and availability in the soil of those atoms which form the substance of our cultivated plants. These atoms so abound in the fertile virgin soils of the West, and are so readily available to the plants, that it requires but little skill on the part of the husbandman to grow maximum crops. But on long cultivated soils, if originally fertile, there is usually a deficiency of many of those constituents so necessary for the production of large crops of corn, grain, and grasses. Here then, knowledge and skill become necessary on the part of the farmer, for the successful prosecution of his business. This skill in part, consists of that knowledge in agriculture which enables him to procure from the cheapest sources, the plant-food so necessary for his growing crops, for this is a matter of "dollars and cents" with him.

The great body of our farmers must depend principally upon the manure of their farm stock, and other manurial resources of the farm, for growing remunerative crops and keeping up the fertility of their land. In the proper management and application of farm manure, depends much of the success of profitable farming. The want of care and forethought on the part of many of our farmers in regard to this matter, is very much to be regretted. In some excursions we have made this winter, we have seen hundreds of loads of manure lying at the hovel windows, exposed to the washing of rains and melting snows, whereby much of the valuable soluble portions of the manure were carried off in the dark-colored rills of water that coursed from the yard; while there had been no provision made to save the liquid portion voided by the stock. These liquids hold in solution much of the real fertilizing matters of the manure, and they should not be suffered to run to waste. In the long run, we think farmers can generally expend money in the saving and composting their manures, much more profitably than in the purchase of guano or superphosphates. There may be some exceptions. But the use of these concentrated manures, if of prime quality, does not add anything to the permanent improvement of the soil, but usually tends to hasten its exhaustion of many of the naturally fertile substances it contained.

The plowing in of clover, or manure composted with two or three times its bulk of swamp muck, or leaves and mold from the woods, will give immediate returns, and at the same time add lasting fertility to the land. We are happy to say however, in our excursions above alluded to, that we in numerous instances, witnessed among farmers great improvements in the management of the farm manure, over that of fifteen or twenty years ago. Scores of them have barn-cellars, in which the manure of their stock is stored and protected from waste.

Reclaiming Swamps—Underdraining.

Unproductive Swamp Lands and their Uses—Their Reclamation Profitable—An Example of Underdraining—Character of the Swamp—Open Drains Insufficient—Surprising Effect of Thorough-Draining—Satisfactory Results—Cost, $26 per acre—Conclusions to Open and Under Drains.

Very many farms are disfigured by tracts of marsh or swamp land, of various extent and characteristics, but alike in being nearly valueless in their present unimproved condition, for all the purposes of agriculture. They may afford a covert for birds, or a haunt for reptiles, and perhaps some wild berries and coarse grasses; but their growth, unlike that of the forest, deteriorates rather than increases in value with each succeeding year. Yet when cleared and drained, these wastes and eye-sores of the provident husbandman, become the most easily cultivated and productive part of the farm. The reclamation may be expensive, yet generally a very few years will repay the outlay, and bring in an additional handsome profit.

In our opening paper on this subject, (Co. Gent., p. 185,) we quoted an example in which eighteen acres were reclaimed by open drains, at an expense of some $50. We propose now to refer to the statement of another farmer, whose experience was also called out by the offer of premiums by our State Ag. Society. In this case nine acres were thoroughly underdrained with tile, at a cost nearly five times that of our former instance, yet we doubt not that the experiment of the latter is as entirely, and will be as permanently, satisfactory to the owner as that of the former can be.

At the risk of repeating facts already known to a portion of our readers, (yet, in our opinion, worthy of being restated in this connection,) we condense from the *N. Y. Ag. Transactions* for 1855, the statement of Wm. Johnson, near Geneva, to whom a premium of $10 was awarded for reclaiming swamp lands. The lot, when it came into his possession, was overgrown with small trees, bushes, willows, bog-grass, &c., according to the surface; being a rough uneven piece, full of holes, in which water stood the greater part of the year. The soil was vegetable mold, interspersed with clay knolls; the subsoil a tenacious clay, and it received the wator running from a large tract of surrounding lands. The first work done upon it, was the season after its purchase, when the trees and brush were cut off and burned, and an open ditch run through the lowest part, which carried off the greater part of the *surface* water and improved it materially, but still left it too wet for successful tillage.

In 1855, Mr. J. concluded to finish the work by thoroughly underdraining his field. He cut a main ditch thirty inches deep through the lowest part of the swamp, putting six-inch tile in the same, (after finishing side-drains,) the whole expense being 58½ cents per rod, or about $25 for forty-two rods. Into this, cross drains were led at about two rods apart, and at nearly right angles with the main drain, 120 rods being laid with two-inch tile, and 510 rods with one and a half inch tile; the total cost of the latter drains being 32½ cents per rod, that of the former, four cents more. In the main drain the tile were laid upon boards, to secure them from sinking unevenly into the soil, or from being filled up from its pressure from beneath—a precaution often required in case of large-sized horse-shoe tile, on any but hardpan gravelly soils.

"Now," to quote the statement, "for the result. As the drains progressed, the water began to disappear from the surface, and within about one week after the drains were dug, the water *entirely* disappeared from the *lowest* places. The effect was striking to every one who saw it; that portion drained being entirely dry, while the other portion immediately joining was literally soaked with water, and as fast as the drains progressed the water would rapidly disappear. The experiment has proved *entirely* satisfactory." It is now one of the driest lots on the farm; fit to work at any time, and producing abundantly. The expense of draining was about $26 per acre.

We have little hesitation from our own experience, in advising open drains *at first*, in all large marshes where there is much depth of muck, not only because we believe them amply sufficient to carry off the surface water and allow of the settling of the boggy soil, but because some time must elapse after the surface water is removed, before undordrains can be so laid as to be permanently efficient. When, however, the miry, boggy marsh gains a settled and grassy surface, and yet that grass is coarse and innutritious because of water in the soil, *then* it will be wisdom to underdrain thoroughly, and we know for the farmer, with such land, of no better or more paying enterprise in which he can embark.

Agricultural Botany.

American Weeds and Useful Plants: being a second and illustrated edition of Agricultural Botany. By William Darlington, M. D. Revised, with addition, by George Tuhrber, Prof. of Botany and Mat. Med. in N. Y. College of Pharmacy. New-York, A. O. Moore & Co.

The first edition of Dr. Darlington's Agricultural Botany has been our most valuable book of reference in a compact form, on all matters relating to the botany of farming; the eminent scientific acquirements of its author imparting entire confidence as to its accuracy and ability. In some particulars, the present edition is a great improvement; there are many important additions; the engravings of plants which are numerous, are remarkable for their life-like appearance as well as rigorous accuracy, and indeed we do not now recollect any American work on this science where the figures are so perfect as many of these.

We do not think the study of botany will enable the farmer to become "rich" without the best practical knowledge, nor even generally to raise larger crops; but more knowledge on this subject than many possess would not only prove a great convenience, in identifying new or unknown weeds, but in some instances would prevent large pecuniary loss, by leading to the extirpation of weeds in new localities, before they have attained an extensive foothold. The distinctive characters of the grasses and other agricultural plants will enable the farmer by a little attention to this science, to avoid a great deal of embarrassment and confusion from the misapplication of names.

There are many interesting notes subjoined to the descriptions, of which we copy a single specimen under the head of *Bromus secalinus*, or chess:

Observations. This foreigner is a well-known pest among our crops of Wheat and Rye,—and occasionally appears in the same fields, for a year or two, after the grain crop; but being an annual, it is soon choked out by the perennial grasses,—and the fallen seeds remain, like myriads of others, until the ground is again broken up, or put in a favorable state for their development. The best preventive of this and all similar evils, in the grain-field, is to sow none but good clean seed.

Among the curious vulgar errors which yet infest the minds of credulous and careless observers of natural phenomena, may be mentioned the firm belief of many of our farmers (some of them, too, good practical farmers,) that this troublesome grass is nothing more than an accidental variety, or casual form, of degenerate Wheat, produced by some untoward condition of the soil, or unpropitious season, or some organic injury :—though it must be admitted, I think, by the most inveterate defender of that faith, that in undergoing the metamorphosis, the plant is decidedly uniform in its vagaries, in always assuming the exact structure and character of Bromus!

A similar hallucination has long prevailed among the peasantry of Europe, in relation to this supposed change of character in the Grasses. But, in the Old World, they were even more extravagant than with us; for they believed that Wheat underwent sundry transmutations,—first changing to Rye—then to Barley—then to Bromus,—and finally from Bromus to Oats! I believe the most credulous of our countrymen have not been able, as yet, to come up with their transatlantic brethren, in this matter. This grass has been cultivated within a few years as Willard's Bromus, and the seed sold at a high price. The farmers found that they not only did not get a valuable grass, but were really propagating a worthless and pernicious weed, being thus doubly cheated.

This volume is a neatly printed duodecimo of about 450 pages, and with nearly 300 figures, and is sent by the publisher, A. O. Moore & Co., of New-York, by mail for $1.50.

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Manuring in the Hill for Corn.

This question, which was referred to last week, we find there are various opinions on. *Our opinion is*, that we cannot adopt either mode in all cases. In some soils one mode would be preferable, in other soils the other, while in some soils we might apply part of the manure in the hill, and the remainder broadcast. For example, a few miles east us there are a few towns situated upon a high ridge of land; the soil is very cold and wet, which makes the season late before they can plant; they apply all their manure in the hill; whereas, if they plowed it under or harrowed it in, they would get little or no corn. My rule has been, upon our hill land, where the soil is a little heavier, to plow in a part, and put a portion in the hill; while upon our warm plain land, our different kinds of manure are drawn out and worked over two or three times before it is plowed; in this way it becomes light and warm; after the ground is plowed, it is then carted out upon the furrow and harrowed in. J. B. B. *New Braintree, Mass.*

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Success with a Small Farm at the West.

We have been kindly furnished, at our request, with a statement of some of the farming operations of A. and O. Barnard of Bloomington, Illinois, who both occupy a farm of only *fifty-one acres*, and which as they state, proves "altogether sufficient" for the support of their two families.

They practice thorough and enriching cultivation—plow deep and manure well. They use the double Michigan plow, doing the work in the best manner—and for pulverizing employ a 30-toothed harrow and joint-roller. Manure is spread for corn while the plowing is going on. Corn is planted 3 feet 8 inches each way; plowed or cultivated four times; at the third all the plants are thinned out to three stalks to a hill—the ground is left as level as possible, and the hoe is but little needed. The crop of 1857 on five acres, yielded 511 bushels and 17 lbs. of corn—the whole crop was 2,100 bushels. A quarter acre of potatoes the same year gave 73 bushels 45 lbs. In 1858, the corn averaged 87 bushels 5 lbs.—the planting being late, from the wetness of the weather. In 1857, four acres of spring wheat yielded 106 bushels; in 1858, the crop was nearly a failure—oats nearly destroyed by the army worm.

The cattle are not, as is too often the case, exposed to all winds, but there is a high board fence around the barn-yard, and they are always housed at night.

A large share of their profits consists in buying cattle and other animals, feeding and improving them, and then selling. The following is their statement for cattle and pigs a year ago:

Jan. 28, 1858, and subsequently, bought cattle to the amount of,		$557.00
Six of our own raising worth before feeding,		205.00
Hogs bought, cost,		251.90
Hired labor,		120.00
		$1,133.90
The cattle were sold by May 7, for	$1,047.50	
Hogs, Sept. and Dec., for	431.57	
Ten pigs for breeding stock, about $10 each,	80.50	
One sow on hand, worth	15.00	
Six head cattle on hand, worth	100.00	
		1,674.57
Profits on animals,		$540 67

This does not include the profits on horses, which have not always been fed on the farm—nor the crops sold. Most of the grain was consumed in feeding them.

The owners have been but a short time on this small farm, and do not think its "strength and ability" are yet developed. They have young and thriving orchards, which may yet increase the profits of the land. In addition to the sales, is their own living, pork, bread and potatoes. We regret that we are unable to furnish a statement of their entire products, but hope to do so another year.

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How to Grow Early Potatoes.

Messrs. Editors—I saw it recommended, not long since, in the Country Gentleman, to prepare hot-beds to sprout or start potatoes, in order to get them earlier, and doubtless it would be the best mode for large farmers where a great quantity of them are needed for such uses; but I would say to those who only require a few, to get them early for their own table, that if they will place them in some room where there is a fire kept daily, they will not only sprout quicker than in a hot-bed, but equally well, and sprouts grown in this way will bear the air and sun even if large enough to transplant, and continue to grow after being transplanted, while those grown in the cellar, or in dark and damp places, generally die and start anew after being planted. I sprouted this way, and planted some last season, on some of which the sprouts were six inches in length. I covered all but one row in the usual way, and this one I transplanted, leaving the end of the sprouts some two inches exposed to sun and air. This row was about a week more forward at digging time than the others, though at the first hoeing there was no perceptible difference in the size or forwardness of the vines. I generally hang a basket containing from half a bushel to three pecks of such as I wish for early purposes, in my kitchen, near the stove, the first part of April, and by the time it is prudent to plant or transplant them, they are sufficiently started for the purpose. They may be cut before sprouting or afterwards, or not at all, according to the fancy or method of seeding chosen. For my own part, I consider four eyes sufficient for a hill, and would not care to have more than this were they to be had gratis. E. Allin. *Pomfret, Conn.*

An Experience in Wintering Sheep and Other Stock.

A correspondent who says he wishes to add his testimony in favor of a practice, which though often recommended in The Cultivator, has been neglected too much by others as well as himself, writes us as follows:

"The Cultivator has been 'the man of my counsel' for a good many years, and I have every year made some change in the modes of management in consequence of the hints, suggestions, facts, and recommendations which I have found in its columns. These changes have uniformly, so far as my memory serves me, turned out to be improvements,—a fact which you may easily believe to be no baseless flattery, when I inform you that I was brought up on a farm where such a thing as departure from the established routine would have been considered a proof of great folly, or of something worse. Doing as their fathers had done, was also the rule followed on all the farms around. You can readily see then, that when I began for myself, and read The Cultivator in order to learn how the best farmers in the country managed their business, I must have found a great many ways of managing, in the form of experiences or recommendations, which differed from those to which I had been accustomed. The changes I have made in consequence of these hints and facts, have been improvements, profitable often, and always satisfactory.

"There is one change which I now regret that I had not made sooner than I have, as I would thus have had fewer deaths among my flock of sheep, more milk from my cows, and my working stock in better condition for spring's work. I had seen it stated on several occasions —probably more than once in every volume—that it was of great importance to have sheep and other stock, come to the yard or the stables on the approach of winter in *good condition*, and that it was bad management and poor economy to allow cows, sheep, or any other stock in fact, to depend wholly on the dry, frozen pastures as long as snow left them accessible. I had read more than once that it was almost impossible to get an animal that is poor at the beginning of winter, into any better condition while that season lasted. But though all these things seemed reasonable and worthy of being attended to in practice, like some other of my neighbors, readers too of the same facts and admonitions, I neglected to conform my practice to what my judgment approved. This last autumn however, I resolved to have my stock in the very best condition before winter should set in, and by feeding cows and sheep a little before they were let out into the field in the mornings, and a little after coming home at nights, and by other similar arrangements, I managed to have them all fat or in fair condition when snow came. And though the fear of not having enough hay to carry my whole stock through the winter, has made us feed rather scantily, they are all in *first rate* condition now.

"I have been induced to give you and your readers these details, in the hope that an *additional* testimony in favor of getting stock in good condition before winter, may persuade some to try it."

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Apple Slump.

Place stewed apples in a round pie pan, an inch thick—make a crust of flour, sour milk, a piece of lard the size of a walnut, one small tea spoonful of soda—roll out the crust half an inch thick, place it on the apples and steam it an hour—then turn it out on a plate, bottom side up, and serve up with sweetened cream or butter. Berries may be used in the place of apples. E. J.

Culture of the Onion.

Messrs. Editors—In a late number of the Co. Gent. I read an article on raising onions, which contained what might by some be called bad advice. It said the drills should be from 15 to 18 inches apart. This distance will do for those with whom a large crop on a given area is no consideration; but is altogether too great a space for those who must make every acre yield its utmost. Drills 10 inches apart, is a very good distance, and some sow them only 8 inches asunder. Thus your readers will see that other things being equal, the latter distance will give twice as many bushels to the acre as the former; and the crop in the latter stages of its growth will spread itself over the entire space.

Hoes made especially for this crop, are preferable to others. Any handy blacksmith can make one, using an old file for the blade, which should be kept quite sharp while in use. The cost of a hoe thus made should not exceed 40 cents; the handle can be put in by any one who can use a jack-knife.

Some drill in their seed, which is preferable to sowing by hand, without previous marking. I prefer to mark out the rows before drilling, and for that purpose use a drill-rake made as follows: I took a piece of 2 by 4 pine scantling, 4 feet 6 inches in length, spaced it off for the tooth holes to come 10 inches from center to center—each end hole to be 2 inches from the end of the stick. Put on a handle "to your taste," and you have a tool that will be very useful in your garden as well as onion patch.

Onions should be got in as early as possible in the spring. In harvesting, if not sold at once, they should be kept dry, as moisture will soon rot them. If kept until the next spring, draw them to market as soon as possible, as delays will prove dangerous. J. Evarts Whittlesey.
Durant, Cedar Co., Iowa.

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Management and Profit of Bees.

In the farm report of Mr. W. D. Kelly, published in the report of the Ohio State Board of Agriculture for 1857, we find the following:

I have 57 families of bees. I find it to be profitable to raise bees for honey. I have been engaged in bees for 25 years. I find that all the patent bee hives that I have tried have failed. I have tried many, and they have all failed to be what they were represented to be. The bee miller will go where the bee can go, and if the bees are not strong enough to protect all the comb, the miller will destroy them, or deposit their eggs in the comb, and hatch and destroy the whole hive. This is often done when bees swarm too often, regardless of the quantity of honey they may have. If the bees are strong, they keep out the worms themselves.

All the patent work that I have tried has only proved a harbor for the worms, and at the same time been very expensive. All bee-hives should be so arranged that the bees could have the advantage of driving the miller or worm out by the inclined plane. I have tried an experiment with 19 families in one building, separated of course from each other. Being somewhat acquainted with their nature, I manage the cells so that they make the fine honey in boxes or drawers, that hold 16 lbs.; the building is 12 ft. square, cost about $200. I can take 70 or perhaps 80 boxes or drawers per year—say 70, at 16 lbs. per box; 1,142 lbs., sold at 25 cts. per lb., $280, without destroying the bees. I have one family that I have robbed every year for 14 years, and had its increase. I find to take their honey every year is an advantage to the bees, as well as to the owner, if properly managed.

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A Good Cheap Coffee.

Take coffee and peas of equal quantities; roast them well, separately, taking care not to burn them; grind them together and serve up according to taste. By the addition of the peas, the coffee clears itself, and settles perfectly without any other addition, and moreover makes a much cheaper and more wholesome beverage. I think the large, rich kinds of peas, such as the Blue Imperial, are preferable, which can be raised very easily by any good, frugal housewife, in her garden. Sow about the 10th of June and they will be free from bugs. Mary.

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Indian Bread without Yeast.

Three tea cupsful of Indian meal, two of rye or wheat flour, one-fourth of a tea cupfull of molasses, one tea spoonful of salt, and one and a half tea spoonfuls of saleratus. Mix in one quart of sour milk. Bake two hours. The family pronounce this excellent, especially when first made. Amanda.

A Good Farm.

What are the requisites for a good farm—such an one as would take and deserve a premium, and prove an example and an encouragement to farmers generally? Let us offer a few thoughts on this subject—recalling, if not suggesting, valuable hints to the reader. A farm should furnish a pleasant and comfortable home, and a healthful and remunerative business, and a good one readily does this for the owner. It should possess

I. A good soil—either naturally, or made so by cultivation and manuring—adapted to the production of the different crops usually grown in that locality, and conveniently situated for marketing them profitably. It should have (2) a wood-lot for supplying fuel for domestic use, the fencing and a greater part of the building lumber of the farm, and there should be (3) water convenient to the dwelling-house, barns, and other buildings, as well as for the pastures. These may be either naturally or artificially supplied, by streams and springs, or wells and cisterns, as the locality will allow.

II. A good farm is well fenced—divided into suitable and convenient lots by substantial enclosures, either of rails, stone, boards, or other permanent material, conformable to its size, value, and situation. It is (2) properly tilled—every crop being sowed on properly prepared ground, and its after cultivation thoroughly attended to. (3.) The production of weeds is assiduously prevented—the fields, fences and road-sides are kept as clear as possible of "the enemy"

III. A good farm is provided with barns and stables, permanently and neatly built, and conveniently placed and arranged, and of sufficient size to contain the produce of the farm, and to shelter the stock usually kept upon it. (2.) Cellars for storing roots, for the manufacture of manure, &c., are placed under these buildings, and (3) convenient yards attached, so arranged as to prevent waste of fodder and drainage of manure. These yards are well sheltered from the winds, and are supplied with water; the whole establishment forming a comfortable winter residence for the domestic animals of the farmer—such as he may rest content in the knowledge that every want is supplied, and every needless suffering prevented, under his jurisdiction.

(4.) A good farm has various out-buildings to facilitate the different operations in its management; among these may here be named a wagon and tool-house for storing the implements of the farm at all times when not in use; a work-shop supplied with proper tools, a granary and corn-house, a convenient piggery, a poultry-house, etc., all conveniently arranged and situated, and neatly and permanently erected.

IV. A good farm has a good dwelling-house, judiciously arranged for the comfort and convenience of the women; neatly built and kept in perfect repair—with a good cellar, a well and cistern, a wood-house, ash-house, smoke-house, ice-house and closets, near at hand; and these and all other buildings, well painted and secured from decay. It has (2) a neatly fenced front yard, enclosing (3) a grassy lawn with ornamental trees, plants and flowers—the whole appearance of the house and grounds indicating the abode of taste, neatness and comfort.

V. A good farm has a good orchard, containing the best varieties of market apples, and other fruits; also (2) a kitchen garden—where are raised in their perfection, all the culinary fruits and vegetables usually grown in such places. (3.) A fruit garden for cherries, plums, pears, &c., and also grapes, raspberries, strawberries, currants, and in short all the fruits which may be grown in the open air, is provided and given due culture and attention.

Such are some of the requisites of a good farm. We shall proseut hereafter some of the characteristics of an Average Farm, a subject equally interesting and instructive.

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Growth and Consumption of Wheat in New-England.

At a late agricultural meeting at Keene, Cheshire Co., N. H., one of the subjects discussed was the question, whether the farmer cannot raise wheat and supply himself with flour, at less cost than he can raise other articles, and after subjecting himself to the trouble of marketing these, and to the cost of paying three or four profits to those through whose hands the wheat and flour have passed, purchase what of the latter he may need for his family supply. From the tenor of the confessions and remarks made, there seems to have been a pretty general impression that the farmers of that county, as well as of other portions of New-England, were working to disadvantage in neglecting to raise wheat, while at the same time they purchased so largely of flour. As an illustration of the amount of flour purchased in the towns, it was stated that in a single town in that State, in which there was no manufacturing establishment, but where nearly all the people were engaged in farming, and the population was only 1,500, flour was annually sold to the extent of about $5,000, or of $3.33 for each individual. This estimate, though at first sight it may appear rather large, will not appear at all exaggerated when it is considered that in several districts of the country, where wheat is almost exclusively used for bread, it has been found that the consumption averages about five bushels, or a barrel of flour, for each person, young and old, per annum; and that in some families, the rate of consumption has been found as much as seven or eight bushels for each mouth in the course of a year—this larger consumption having been caused, most probably, either by the want of a garden and its manifold contributions to the table, or by some other circumstance leading to an almost exclusive dependence on fine flour.

If, as seemed to be thought by some of the speakers, flour is consumed throughout New-England at about the same proportion for each person as in the one town referred to, it cannot be otherwise than that the question stated in our opening sentence is one deserving of a full consideration, a free discussion, and an early decision. Years ago the West produced wheat so cheaply and so abundantly, as to discourage the farmers in New-England in their attempts to supply the home demand, and to reduce the price so low that their wheat crops were scarcely remunerative; but of late, the ravages of the wheat-midge, the exhausted condition of lands from continual taking from them and making no returns, and other circumstances, have placed East and West more upon a par, and made it less difficult for the former to compete with the latter in the raising of wheat crops.

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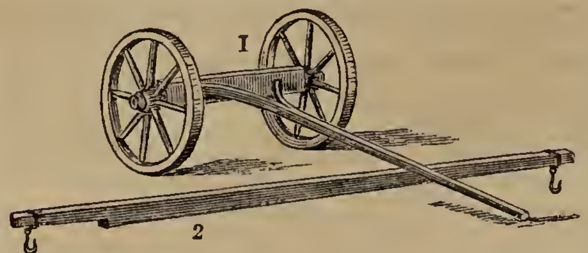
Hereford Cattle.—We learn that John Merryman, Esq., Hayfields, Md., has lately made very considerable additions to his herd of Herefords, by purchase from Wm. H. Sotham and Fred. Pumpelly of this State, and also from the Massachusetts Society for the Promotion of Agriculture.



Stump Machine.

MESSRS. EDITORS—Seeing the call of Mr. HULME and others for a more extended description of my Stump Machine, though I can use an axe or shovel better than pen or pencil, yet I will endeavor to enlighten them on the subject. One reason why my former communication was not understood, probably is that the ox-carts of Pennsylvania may be differently made from those of Maine. Here they are made with two very large and strong wheels, with a tongue that goes into the axle, about eleven to sixteen feet in length, according to the work you are doing. Now, if we say fifteen feet, by looking at the figure (1,) it will be seen that about four feet is in two parts. A stick or lever, (fig. 2,) 4 or 5 feet longer than the tongue is so cut out on one end as to fit where it crosses the axle, when laid upon the top of the tongue. This lever should be, say seven inches thick in the thickest place; it may taper down to one and a half or two inches at the long end, while the short one which projects beyond the axle, should be, say four inches thick—the breadth of the lever being uniform throughout, and the same as the breadth of the tongue itself—the two being attached together by two straps of iron slipped over them, which can be easily procured from the blacksmith as I before suggested. The lever is provided with a strap of iron and hook at each end. In operation we place the lever (2) upon the top of the tongue (in fig 1.) fastening it snug with the iron straps, and it is a good plan also to pass a chain around the axle and lever where they cross, to resist side strains. The long end is raised in the air, and there will be about three feet perpendicular height, to which you can lift a stump or rock with the shorter end. The axle must be a strong one. A chain having been fastened around the root of the stump to be pulled, is then hooked to the shorter end of the lever, to the longer arm of which elevated in the air, a tackle or "tackle and pull," as it is sometimes called, is hooked, and the lower block of the tackle being secured to another stump, or some similarly stationary object, then to pull down the longer arm exerts an immensely multiplied power in pulling up the stump, and one which it cannot well resist. I said in my other communication that if the long arm of the lever is eighteen feet, the short arm two feet, and the tackle has four ropes, one yoke of oxen pulling on the rope would exert thirty-six times their own power in extracting the stump, and by varying the length of the lever, &c., the power could be still further multiplied. H.

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Starting Flower Seeds.

Now is the time for every one who can have a hot-bed to put in flower seeds in order to have early flowers. In our climate it is best, if you do not wish to be disappointed, to wait until the 15th of May at least before planting seeds, as there is much risk of the seeds rotting if planted previously. In a gentle hot-bed seeds may be planted the first of April in pots, and as soon as they are half an inch high, put about three plants into a three inch pot and let them grow until about the 15th of May, when they may be transplanted into the borders where they are to remain. By pursuing this course you will gain at least a month in the flowering of your plants. G. B. H.

Culture of the Turnip.

MESSRS. EDITORS—A few weeks since, I noticed an inquiry in the Country Gentleman, from one of your subscribers, in relation to raising roots to feed his stock with, in the winter season. There is no doubt in my mind, about the benefit and profit of raising root crops to feed all kinds of farm stock with, during that part of the year in which they are fed on dry fodder. After an experience of more than a dozen years, I am satisfied that what roots I raise and feed to my stock, pay me a larger profit than any other crop I have ever raised. I have raised the carrot, sugar beet, mangold wurtzel, and various kinds of turnip, and I have come to the conclusion that the turnip is the most profitable root crop for me to raise, for several reasons. One is, I can raise a much larger quantity of turnips on the same amount of land, than of any other kind of roots that I have raised—another reason is, it is much less work to cultivate and harvest a crop of turnips, than other root crops, and there is sufficient time, after the rest of my spring work is done, to put in the crop, and have it mature, as it can remain in the field until all my other crops are harvested.

To raise a good crop of turnips, it is necessary to have a deep, dry, and mellow soil, and on most kinds of land there is no danger of having it too well manured, for the turnip is a gross feeder, and when a sufficient quantity of food is given to it, it will grow luxuriantly, and yield bountifully, and indeed, the quantity and quality of the crop depends on amount of manure applied to the land. My method of raising my crop is as follows: When I get ready to put in the crop, a sufficient amount of manure is spread on the land, and plowed in, and the land is then thoroughly harrowed with a light harrow. I then take my horse and horse-rake, (the rake is one of the coil spring wire tooth rakes,) and rake the surface of the land over until it is smooth; if the land is in a suitable condition to cultivate, raking it over twice will be enough. After this is done, I take my seed sower, which is one of Nourse & Mason's manufacture, and sow the seed in rows, two feet apart. As soon as the second leaf of the plant gets well out, I hoe and thin them where the plants stand too thick. At the second hoeing, which is generally ten or fifteen days from the first, the plants are thinned out to one foot apart, which is as near as they should be allowed to stand, and where the land is very rich, eighteen inches will be near enough. At these distances the tops of the root will entirely cover the ground. I usually hoe the crop three times. After the seed is sown, I hoe the land as soon and as often as any weeds make their appearance, which rule I intend to follow with all crops that I cultivate. I let my turnips remain in the ground as long as I can, and get them harvested before the ground freezes, though it does not injure a turnip if it is frozen some in the ground. In several instances I have known the surface of the ground to freeze quite hard before my crop was all harvested, yet the turnips were not injured at all. To pull my turnips I use an instrument made of an old manure fork, the prongs cut off to five inches in length, the shank bent and fitted to handle like a hoe, and used in the same way, that is, pulling the root out of the ground with it. I let my calves into my turnip field a short time before I wish to harvest the crop, and let them eat off most of the tops; this saves considerable labor in trimming them, and the tops make fine feed for the calves. With my method of managing the crop, it is less work to put in, cultivate, and harvest a crop of turnips, than either a crop of potatoes or corn. I usually get from 600 to 1000 bushels per acre. The crop thus far has been a sure one with me, having been exempt from the ravages of insects and diseases. It will endure the drouth of summer or the frost of autumn, beyond any crop I raise. The kind of turnip I raise is similar to the rock turnip raised in Connecticut, or the Sweet German turnip. I have raised them all, and consider the kind which I raise equal in every respect to either of the others. Last year I raised some of Skirving's Improved Swede and River's Swedish Stubble turnips. Both kinds yielded about the same as my sweet turnip. Of the two kinds I should prefer the Swedish Stubble to Skirving's, as the latter kind runs to neck a good deal, but the former kind has none, neither has it as much root as Skirving's, yet both kinds are valuable for winter feeding, as they keep well, and cattle and sheep eat them readily, and all of the kinds that I have mentioned, when boiled or steamed, with potatoes, apples or pumpkins make good feed for hogs, and after they get used to eating them, they will do well on boiled turnips alone. But as this communication is getting rather lengthy I will postpone to another time my experience in raising and feeding root crops to farm stock. C. T. Alvord. *Wilmington, Vt.*

Cisterns for Stables.

Some of your subscribers were inquiring about building cisterns. A few years ago I built a new stable, 36 feet long, 20 feet wide, with a 12 foot shed along one side; I got tin spouts put on both sides, and joined together on the center of the south end. Here we sunk a hole 11 feet deep, 10 feet in diameter, and intended to cement it on the clay to about three feet of the top, from which turn an arch of brick, but I met a person who had one built in this way who told me that the roots of the trees pushed the cement off the clay, and he advised me strongly to wall it up with stone and lime mortar. I had heard of other cisterns that were plastered on the clay, "caving" in, and I hauled as many thin limestone from the creek, say 2 to 3 inches thick, (thin stone do best,) as walled it up to within 2½ feet of the top of the ground. The wall is nine inches wide at the bottom, and reduced to six inches at the top. The plasterer turned a very flat arch on this (with brick) four inches wide, by working round and round like a screw, and inclining the brick on their edge a little more every round, till they were nearly on their edge, and till the hole was small enough to hold the metal frame, which was then set in. We filled about the brick with clay, and rammed and tramped it; over the clay we spread gravel. The arch rises about a foot above the level of the ground, and we formed a mound over the cistern so that any water that is spilled runs off. I think a brick arch is far better than wood, as the wooden covering must be level, and any water that falls on it may drip through into the cistern and the wood may rot.

I told the mason that I thought a four inch arch too weak, and that he ought to make it the length of the brick, nine inches. He replied, "the four inch would carry one corner of the barn, and that it would last as long as the Pyramid of Egypt." I find this cistern a great labor-saving article, and one of the most useful and convenient things about my place. The creek is only two hundred yards from the stable, but sometimes a horse comes in too warm; we let him cool, and then give him a bucket of water out of the cistern, and if the hay is dusty we have water convenient to sprinkle it. It is not as big as intended by the thickness of the wall, but last summer we watered four horses half the time out of it, and it never ran out.

Cost, mason building stone wall, three days, $1 50—plasterer, turning arch, plastering first with mortar to fill the unevenness of the stone, plastering with the cement and replastering the old cistern $5—cement $3.50—lime $1 50—digging $5—chain pump and box $5 50—total, $25 00. Tin spouting $19.75—say $45 in all. The stable cost $176 75. It has 17 feet posts, which give a good hay-loft above. It is a double stable with four stalls in each end 15 feet long, and a feeding place in the middle 6 feet wide; two windows in each end, and a trap door to throw down the hay in the feeding place, which acts as a ventilator to carry off the horses' breath. I ought to have a cupalo on the center of the roof. J. J. Craig. *N. Madison, Ind.*

Culture of the Grape.

Eds. Co. Gent.—The following article on grape culture, was read before the Farmer's Club in this village, on Saturday, Jan. 29, 1859, by Mr. Wm. P. Giles. If you deem it worthy of a place in your valuable journal, I shall consider myself well paid in sending you a copy. W. M. Beauchamp, Secretary to the Farmer's Club. *Skeneateles, Feb. 1st, 1859.*

Gentlemen of the Skeneateles Farmer's Club: Of the many different plans adopted to increase the productiveness of land, and thereby render its cultivation more profitable, that of grape-growing, for the last few years, has claimed a large share of attention; not only has the amateur fruit grower and gardener so done, but men of skill and energy, in different parts of the country, are devoting time and capital to the production of grapes as a market fruit. I propose at this time to give a short account of one of the latter class and his success.

H. H. Farley of Union Springs, Cayuga Co., a dentist by profession, came in possession of a piece of land lying on a point that jutted out into Cayuga lake, a portion of which he immediately proceeded to fit for a vineyard in 1854. In the spring of 1855, he planted his vines, and at the same time raised a crop of potatoes. The crop proved an excellent one, and paid all expenses for the cultivation that year. In 1856, he had his posts set for trellises, and began training his vines on them, but allowed no fruit to grow. In 1857, the vines having done extremely well, as the sets for fruit were very numerous, he allowed a portion to remain and mature, cutting the rest off at the time of summer pruning. He obtained about three tons of grapes, notwithstanding the wet, unfavorable weather; they ripened well and in good season, and sold for about $1,000.

On the 11th of October, 1858, I visited his vineyard. They were then gathering the crop of perfectly ripened fruit, and though he estimated the crop only at about one-third what it might be when the vines are older, it was hard to believe so loaded were the vines with large clusters of luscious fruit.

The picking and packing which was then going on, was all done with the greatest care. So great was the perfection of cultivation, that not a weed was to be seen. In answer to my inquiries concerning the soil and manner of preparing it, manures, cost of cultivation, amount of crop, profits, &c., he kindly furnished me the following statement:

"1. The soil of my vineyard is varied, or more properly spotted, being in part sandy and gravelly loam, underlaid with limestone; while another portion is clay with a subsoil of stiff clay; to these may be added patches of black muck with a clay subsoil. With the preparation I have given my grounds, I see but little difference in the health and growth of vines on these varid soils. I am of the opinion that any soil that will produce good corn, is well adapted to the cultivation of the vine.

2. It will pay to underdrain all soils that are not absolutely light and sandy. I have underdrained nearly every rod of ground that I have planted. I put in tile drains about three feet deep and from one to two rods apart.

3. Previous to planting, I applied to most of my land, about fifty loads per acre of compost, made of stable manure and swamp muck, four or five of the latter to one of the former, and upon the patches of

heavy clay about one hundred loads of coarse sand per acre in addition to the compost. Since planting, I have put on an annual dressing of forty or fifty loads per acre of muck as a top-dressing.

4. I planted mostly two and three years old roots, and gathered a little fruit the third year after planting, though a vineyard should not be brought into full bearing until the vines are eight years old.

5. The past year I had in bearing about six acres, the age of the vines varying from five to seven years.

6. Regarding the cost of cultivation I am not informed, as I have blended other crops with the cultivation of the vines, though I am of the opinion that it would not vary much from $50 per acre, per annum, including summer pruning and training. This sum would certainly do the rough culture.

7. The crop the past season was only a ton and a half per acre, which I consider one-third of a crop when my vines are in full bearing.

I sold some grapes in Montreal, Canada East—some in New-York, a few in this vicinity, and the balance to a gentleman from the west, who distributed them from Chicago to New-Orleans. The net receipt for grapes the past season was $250 per ton; however, I am of the opinion that so high a price will not be realized again.

I permit my vines to produce but small crops, which is governed by judicious pruning, and thinning out the fruit when small. By this means the residue is larger and much higher flavored. In this way I am enabled to get the highest market price."

You will perceive by this statement, that the net proceeds of six acres of grapes at $250 dollars per ton, or 12½ cents per pound, without any expense of transportation, was $375 per acre. Deducting $50 for cultivation, and he had $325 for profit, a return quite as good I think, as a tobacco crop would have been. And is it not a strong argument against the cultivation of tobacco, that the same ground, with less work, will produce an article of such agreeable properties as to recommend it to the taste of every one, and commanding a ready market with large profits.

Draining Slops from Houses.

Eds. Country Gentleman—As all matters relating to domestic economy that have a bearing on the health of our families, are exceedingly important, I may be indulged in a few remarks in reference to the *drainage* from the wash-house and kitchen, which is variously disposed of in our country places according to the *taste*, or the absolute *absence* of taste of the proprietors.

I shall, without attempting to disparage the judgment, or the practice of others, proceed to describe the plan which I have adopted, in order to avoid on the one hand the unsightly and inconvenient accumulation of ice near the kitchen door in the winter; and on the other, the still more offensive effluvia from the sink gutter in the summer. The water is conducted from the wash-trough into a drain beneath through a 2 inch lead pipe some 2½ feet long and so curved as to allow a portion of it always to stand full of water, which is, of course, displaced by each successive deposite; thus forbidding the ingress of cold air, or the return of noxious gases from the cesspool below. It will be observed that to secure the advantages of this arrangement, the drain must be carefully closed around the insertion of the pipe. The drain is made of brick with a fall of nearly an inch to the foot, and sufficiently deep under ground to render it secure from freezing; it terminates at a suitable distance from the house in a pit 4 by 6 feet, and 5 feet deep, walled up to the surface of the ground and securely covered. As there is considerable amount of waste water from the wash-house and kitchen, where there are several in family, this depository will occasionally require to be pumped out. I have therefore provided it with a cheap pump, so primitive and simple in its construction as to have cost less than two dollars; and yet so efficacious in its performance as to discharge, with ease to the operator, a hogshead of water per minute. It is made of pine boards about 5 inches square, with a stationary valve near the bottom, and a movable one attached to the piston rod as in the common pump—the piston is worked *without* a lever.

The contents of the cesspool are made to subserve a valuable purpose both as a renovator of the soil, and also for irrigation. In the latter relation it is exceedingly useful to the garden; for in a few minutes a man will throw up enough water to thoroughly irrigate every part of it—thus carrying both moisture and nourishment to the plants at a time when they most need it.

I have been thus explicit, because I believe this arrangement has many palpable advantages over every plan of conducting the drainage away on the *surface;* and because I have thought that a lack of perspicuity in a communication on so very common place a subject would detract from the *little* merit it might otherwise possess. C. *West Grove, Chester Co, Pa.*

Experiments in the Culture of the Potato.

Eds. Co. Gent.—The best mode of the culture of the potato is a subject of much importance, and one that will bear much investigation and study, and one that has attracted and is attracting the attention of the farming community to a considerable extent. I think that farmers do not devote the care and attention to this crop that they ought, for the potato is valuable not only as a vegetable for family use, but is very good to feed to stock through the winter and spring.

Our usual mode of raising potatoes is to plant on either sod or old ground, well manured, and use the largest and best for seed, well cut with a suitable quantity of eyes to each piece, with two pieces in each hill, and planted in rows 3½ by 4 feet, so that they will admit of being plowed each way, saving a great amount of labor with the hoe. But the last season I thought that we would plant a small piece in a different manner. This was planted on sod ground turned in the spring—soil, a gravelly loam, with a slight descent to the southeast—and planted in drills 4 feet apart—drills made with the shovel-plow, as usual. The best potatoes were selected for seed, and cut some three weeks before planting, in pieces with three eyes to each piece; and as one man passed along and dropped them one foot apart in the drill, another followed with a compost of hen manure, lime and ashes, and dropped at the rate of about one-half pint to each piece. The kind of potatoes planted were the Irish Cap and the White Merino; and to determine whether the compost would have any effect on the yield or not, there was one row of each kind left without the compost.

Now for the result of the experiment. At the time of the potatoes coming up, those with the compost were full four days ahead of those without, and at the time of hoeing, there was the same difference plainly to be seen. They continued more vigorous through the whole season, having a larger growth of tops, and of a darker color, than those without the compost. Now methinks I hear my brother farmer inquire, was there any difference in the yield? We answer, yes; those with the compost were much larger and more of them. I think that the difference in the yield more than paid for the extra expense of the compost, and labor of applying the same. Although the yield was not exceedingly large, yet it was good, compared with the yield of potatoes in this vicinity, (which was small the past season,) for at the time that the potatoes were in the blow, they were attacked by the potato bug, and stripped clean of their leaves, so that nothing but the bare stalk was left; but they again leaved out, and continued fresh and green up to the time of digging, which was Oct. 26th and 27th, not having had frost enough on this piece to kill the vines, although we had had frosts enough to kill the corn on some fields. A Subscriber. *Mantua, Ohio.*

Garget Poison to Horses.—A writer in the *N. E. Farmer* relates a case where two horses died from the effects of a few small pieces of garget which had been cut for a cow in a hay-cutter used for cutting their feed.

Grass Culture.

It has been well said that "he is a benefactor of his race who makes two blades of grass grow where one grew before." That the honor is so easily earned, is perhaps one reason for so little effort to deserve it. The number of farmers, in grain-growing sections especially, who make grass culture the direct object, is comparatively small—very few give meadows and pastures the attention their importance demands, and which would be returned so handsomely. The truth is, the grasses get only slight culture or care—usually only timothy or clover are sown, and these with some grain crop. If the latter gets a dressing of plaster, it may be thankful, as it is generally the only fertilizer bestowed. The demands upon them, however, are less scrupulous both in hay and pasture, early and late—exacting much and bestowing little upon the ever-patient grass-lands.

The subject ought to receive more attention. Grass exceeds in value any other product of the country, although, as Prof. Johnston of Edinburgh, truly remarked, it is the worst treated of any crop among us. As yet it occupies double the number of acres necessary—the average yield of forage being less than half of what it might easily be made. Look at an instance in point. Mr. Elijah Wood, Jr., of Concord, Mass., as stated in the *N. E. Farmer*, produces on low, moist lands, an average of two tons per acre of excellent hay, and without re-seeding for ten or twelve years, by a judicious and not expensive course of management. When broken up, the working is thorough, the manuring and seeding liberal; and every other year, he gives a top-dressing of rich, well-pulverised compost. The hay crop is worth $15 per ton, or $30 per acre; the rowen is worth at least $8 more, while the cost of getting the hay, and interest on the land at a liberal valuation, is but $11, leaving $27 clear profit. There are thousands of meadows which might be made to do equally as well, which now do not yield an average of three-fourths of a ton per acre, and of inferior quality at that.

We might readily improve the character and productiveness of our grain-land meadows, by a more judicious management. Instead of cropping with one grain crop after another, until they can bear it no longer, we should seed down while yet in good heart, and seed down thoroughly and liberally. There is a very essential difference between the product and the profit of a field seeded sparingly, and one actually covered with grass and clover. The crop is of better character, as well as more abundant—it is not made up of weeds to any extent—it is less liable to suffer from winter-killing or drouth, and far more permanent either as meadow or pasture. In land partially exhausted, grass seed takes much less readily and perfectly than on land still fertile and adequate to the production of a medium grain crop. We believe more money can be made by following the rule to seed down with every sown crop than by neglecting it, even if we plow up the grass the next year, though this will seldom be necessary where corn and roots are produced.

Our plow lands, as hinted above, unless annually manured, should come into grass as often as every third year. If they are to remain but two or three years, it is well to seed liberally with both timothy and clover. The better and thicker the sward, the more successful the crop following its breaking up, and the less likely our lands to deteriorate in productiveness. The more we can grow on a single acre, the less need of running over two or three with the plow, and the greater chance for making all our lands yield liberally when we do plow them. We throw out but these few hasty suggestions, hoping the subject will receive the attention of our practical graziers and grain-growers, and they will communicate their experience for our journal.

Origin of Coe's Transparent Cherry.

This excellent cherry was raised from the seed by Mr. Curtis Coe of Middletown, Conn., and first brought into general notice by a description of it by Mr. Downing, published in The Horticulturist, in 1847. We have a letter before us to a gentleman of this city, from Mr. Coe, in which he says:—"The way I obtained the parent tree was as follows: I planted seeds from trees of various kinds of cherries growing near each other. I raised from 50 to 60 trees from these seeds, which produced every one a different kind of cherry—not one of them like the originals from which the seed was obtained, nor any two of them alike. In this lot of seedlings there was but one very superior cherry, and that I named *Coe's Transparent Seedling Cherry.*"

Management of Horses.

Eds. Co. Gent.—I observed in the Country Gentleman, dated March 17, an inquiry made, of "what ails my horse?" by a person in Wolcott, Ct. He states that his horse is young, had not been harnessed for a week, and could hardly raise a trot—he fell down—very inactive—he ate and drank as usual—stupid and stiff, rather full and bloated—he is quite fleshy.

He has told us "what ails him." I suppose he wants to know the cause and a remedy. If the horse has not been foundered, it probably arises from want of exercise and too high feeding. A young horse is the better for being exercised every day, and fed upon a little hay *three* times a day, and two quarts of oats *three* times a day, and kept what is called in good order—not "fat and bloated." A horse that is worked or driven a great deal, should have his oats increased perhaps to *four* quarts at a feed; in some cases horses require even more than that quantity; if so add a little corn. A young horse requires more exercise than an old one, and if he is kept high and used but little, he will puff and blow, and is not in good condition to drive, and will "fall down." He loses the use of his limbs from want of proper circulation of the blood through his system. The horse requires a great deal of care bestowed upon him, and should be driven the first mile slowly. He will then be in good condition to have the lines drawn upon him, and, *if fast enough*, he will be able to keep the track and out of other's dust. Walk up and down steep hills when not hurried, so as not to distress him. When the horse returns to the stable, he should be well rubbed, then blanketed, and when dried off have a good currying. Before being fed with oats or water is given him, he should eat a little hay.

The writer of this has a horse that he has driven twelve years. He is now seventeen years old, and apparently as good as ever, and full as fast, and he expects he will last *ten* years longer if no accident happens to him. He is never sick—is fed as occasion requires. Never feed with clover hay, as *it* will, *nine times out of ten, produce* the *heaves* Good, sweet Timothy hay and oats are the best feed for a driving horse, and a quart or two of ship stuff at night if he wants loosening. I have known a *splendid* horse ruined by high feeding and the want of exercise—he would fall down, and finally died. Darby. *Del. Co, Pa.*

Visit to a South Carolina Plantation.

EDS. CO GENT.—It would be well for the shallow-plowing, and no-grass-growing planters, still so numerous in many sections of the South, to visit the plantation and nurseries of the Messrs. SUMMER, at Pomaria, South Carolina. There they would see, even in the winter, fields green with grass, winter oats, barley, wheat and turnips (ruta baga,) and if their visit be the last of February, or the first of March, they would witness the land being plowed deep with a double team, for Cotton, and manure placed in the furrows made with a shovel plow for the rows of cotton. They use guano, stable manure, and a compost which will be experimented on this season and the results published in the Planter. I saw a field of about three acres of Egyptian Winter oats and barley, which had been pastured with thirty sheep during the winter, and which now gives promise of a fine crop. The sheep are the Southdowns, part of which have been imported from England. I do not see why the coarse-wooled sheep cannot be made very profitable; the mild winters here renders their keeping much less expensive than at the North. All the cattle, horses and mules are stabled at night and during the storms of winter. This is economy, because it lessens much the expense of their keeping. It is also satisfactory to the proprietors to reflect that all their stock are comfortable during storms and cold nights. This is the first and only instance I have seen of cows and cattle being stabled at the South. Each cow and steer knows its place, and goes there to be fastened and receive its evening's allowance. The Messrs. Summer prefer the Devon stock, of which they have some fine full bloods, of which they sold one about one year old, a few days since, at $150. They top their corn, cutting off the entire stalk just above the ear. The stalks are tied in bundles with twine, shocked, and at leisure, when thoroughly dry, stacked for the winter, and, when needed, hauled into the barn and cut with a cutting machine. Oats in straw are also cut and occasionally mixed with the corn fodder. By having all the food cut, they have no long manure, all being fitted to mix freely with the soil. The quantity of manure is also increased by stabling the stock. By plowing deep, not only is the crop increased, but the soil is less liable to wash, and there is no necessity for side-hill ditching, now so prevalent at the South, to prevent the land from washing

Red clover is said to grow large; the Kentucky Blue grass has not been thoroughly tested, but the clover and timothy succeed well enough to form fine pastures during the summer season, and the winter oats and barley are all that can be desired for winter pasture for calves and sheep. Cattle and horses are too heavy to be allowed to run at large in the soft fields during the winter. At Greenville, in this State, I saw fine lawns of Kentucky blue grass (Poa pratensis) By far the largest portion of the Carolinas is deficient in lime, the soil overlaying the crystaline rocks, (granite, gneiss, &c.,) hence the utility of lime as a manure. Let the planters use lime, cultivate grass and the cereals, plow deep, and thus they will be enabled to raise more cotton, and their soil will become better and more fertile by cultivation.

The nursery belongs to WM. SUMMER, who is doing much to extend the culture of fruit, ornamental trees and flowers in this State. He has been very successful with the pear, of which he has a great variety. Some which are coarse and almost worthless at the North and in Belgium, in this climate become fine fruit. Cherries do not thrive except when grown on the mahaleb stock. The curculio and black knot does not trouble the plum, of which Mr. Summer cultivates the best varieties. I observed the black knot very abundant on the thorn trees (Cratægus) in this vicinity. This is the region for fine peaches, and if Jack Frost would only stay north and not come here in the month of March, when he is not wanted, what a fine fruit section this would be. S. B. BUCKLEY. *Pomaria.*

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Honey Blade or Hungarian Grass.

MESSRS. TUCKER—I have become wearied of an-answering communications from different sections of the country, for information as to the value and mode of cultivating the Honey Blade and Hungarian grass, which is one and the same thing. The COUNTRY GENTLEMAN having done good service in giving its true character last year, I trust has not become wearied in well-doing, and should like to see a fair description of the Honey Blade stereotyped and nailed at mast-head of the farmer's true sentinels, whenever it becomes profitable for these land-sharks to change its name again. What is this Hungarian grass of last year, and the Honey Blade of this? It is nothing more than what was *Millet* forty years ago—what was cultivated as summer or barn-yard grass seventy years since, which is the meanest of all grasses that grows.

Millet, on soils well adapted to its growth, gives a large yield, though by no means as much as corn, if well cared for, even for fodder, nor will cattle do as well on it as on corn, cured as it should be.

I have never seen it do as well anywhere else as on a newly burnt, clean, dry piece of good corn land, and sown the last of May or first of June. If sown for fodder merely, twelve quarts of seed to the acre, on such land, is not too much, whilst if cultivated for the seed, three quarts to the acre is all-sufficient. Three bushels of millet for feed is about equal to two bushels of corn if ground. It is worth but little to feed whole, except to sheep or hens, as nothing passes through them until thoroughly ground. If fed to horses or or cattle, one-half or three-fourths will be in good condition to grow after it has passed through them. How long it will lay in the ground and keep in good condition for growing, I do not pretend to know, but I do know that it will lay in the ground twenty-two years, when the ground is seeded to grass with the millet and kept to grass that length of time, and then broken up and cultivated for any crop. I have never known a farmer to continue raising it for any considerable length of time.

It is not the value of the crop that I am anxious to call attention to, but the gross extortion by many of the venders, selling an article of seed for ten dollars per bushel that is only worth half as many shillings.

I am anxious that the agricultural journals of the country should stand as sentinels for the farmers, instead of the apologists and advertisers of those who would make fortunes from the sale of Morus multicaulis, Chinese Yam, &c. You have saved thousands of farmers from great loss in days gone by, exposing these and a thousand other worthless things that are hawked on the farmers by these pirates, pretending to be our friends and would-be teachers. A. B. DICKINSON. *Hornby, March 20th*, 1859.

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CATTLE SALE.—Extract of a private letter from Hon. JOHN WENTWORTH, dated Chicago, March 25th: "Your notice of 'Albion' (a Short-Horn bull owned and bred by R. A. ALEXANDER, Esq., see CO. GENT. vol. xi, pp. 284, 369,) was none too flattering. He beats everything that I ever saw. I bought a heifer by him out of Mr. ALEXANDER'S imported prize cow "Jubilee" by Lycurgus (7180) whom you must have noticed. I also bought a bull calf out of his celebrated red cow called 'Grisi' by Grand Duke (10284.) The calf was got by Alexander's celebrated Duke of Airdrie (12730) who was got by Duke of Gloster. Thus he has two crosses of Duchess blood."

Suspension Wire Fence.

Messers. Luther Tucker & Son—Having had much experience in wire fences, and never until now had any that were satisfactory, it may be of service to the public to give you a sketch and explanation of one put up on my lawn last year, which has gone through the seasons for expansion and contraction without injury, and proved a complete barrier against horses, cattle and sheep. I claim no credit for its application, and am solely indebted to Mr. Hewitt of the firm of Cooper, Hewitt & Co., No. 17 Burling Slip, New-York, where I went to purchase wire of the best quatity and at tho most reasonable price, to repair and rebuild a variety of wire fences, which, as I before stated, were not satisfactory.

Mr. Hewitt informed me of a suspension fence, invented by his brother Charles, which he said was a perfect thing, and comparatively low priced, and was kind enough to describe it in the manner I am going to do to you, (but without a drawing,) informing me where samples might be seen in use, and offering to send me a practical man to put it up. I accepted the latter proposition, which I can assure you is the most important part, as the whole merit and beauty of the fence depends upon its being put up in such a way that if an animal comes in contact with it, each strand or wire will bear a proportional part of the strain or pressure.

The above illustration, with the size and quality of the wire, with an approximation as to cost, may induce parties wishing to build wire fences, to try this kind, which is the object of this communication; and if they desire to see mine, my location is such that they can do so readily. The engraving represents a panel of 100 feet in length, (the panels may be from 50 to 150 feet in length) the suspension rod, supported between two trees, being eight feet high at the trees, and five feet high at the center of the panels. The wires are secured to the trees by small sized staples, which will not injure their growth if properly driven and the trees are of a good size. The top or suspension wire, is of a larger size, say one-quarter inch rolled iron, upon which all the other strands (of number eight to number eleven annealed wire) are hung or suspended, by up and down smaller sized strands, (of number twelve annealed wire,) which are neatly woven, five feet apart, on the parallel strands, and secure the parallel strands at proper and equal distances apart. A wooden pin or stake is fastened to the center, and at several other parts of the panel, and driven into the ground, which draws all the wires "taut," and gives the panel a neat, festooned and graceful appearance. When cold weather approaches the pins or stakes can be drawn up a little, which gives play for contraction.

Paint the wires with rosin or coal tar, which costs a mere nothing, and may be applied by any common laborer, by warming the tar and dipping a woollen rag in the pot, and apply it by clasping the wires with the hand and rubbing it on, which is very expeditiously done. One or two coats will give it a glossy black appearance, and prevent all rust.

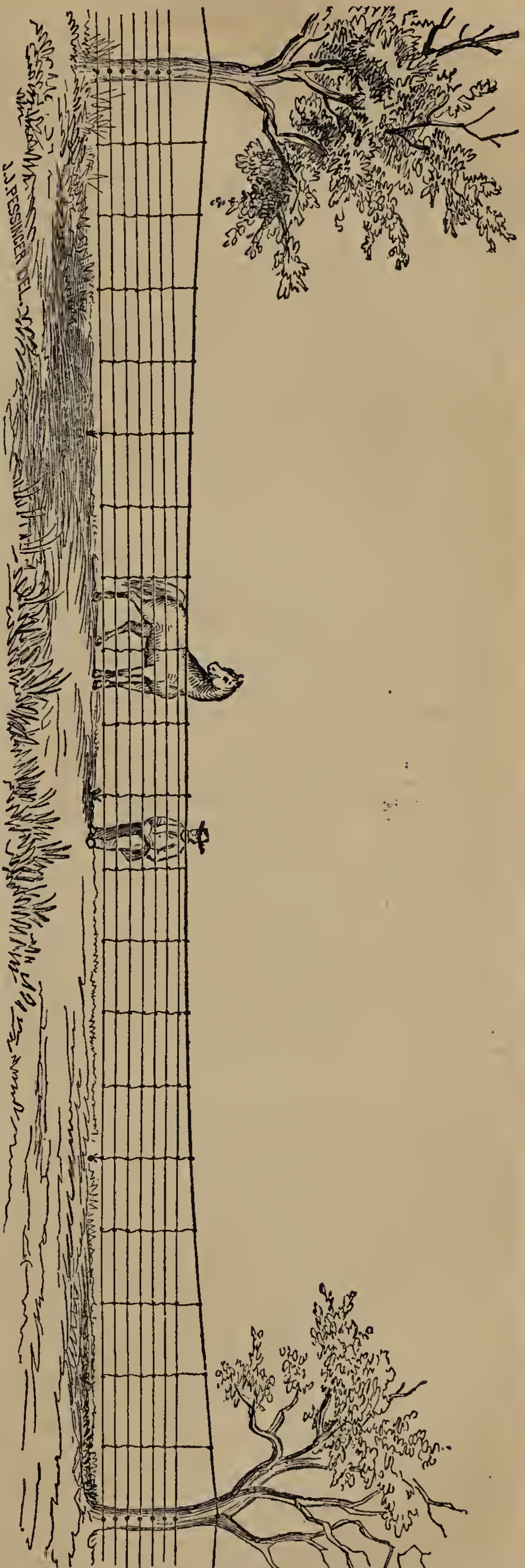
If trees do not exist where the fence is wanted, it is built in the same manner on posts set firmly in the ground, leaving eight feet above ground—panels fifty feet long. The posts should be well secured by sideway braces, either above or below ground, and the starting and ending posts, if trees cannot be had, will require very great care to make them firm in every way.

The cost of this fence, if trees are used, (which saves the expense of posts and setting the same,) will vary from one dollar and twenty-five to one dollar and fifty cents per rod, if the wire is properly purchased, and hands employed who understand the erection of it. In no cases let the number of strands be diminished, as cattle will attempt to get their heads through and graze on the opposite side, and will strain single wires, marring the uniformity of the fence, and giving an unseemly and careless appearance, by the grass or crop on the opposite side being bitten off unevenly. I would rather recommend an added strand, say eight instead of seven, besides the suspension rod. Yours very respectfully, &c., L. G. Morris. *Mount Fordham, Westchester Co., N. Y.*

* * *

How to Pickle Plums.

For seven pounds plums, take four and a half of sugar, one quart vinegar, four ounces cinnamon, two ounces cloves—put the spices in a bag—scald the sugar, spice and vinegar together—then pour over the plums—cover tight—let them stand on the stove and keep hot—but not boil, for four hours. J. A. S. *Buffalo.*


J.J. PESSINGER DEL.

☞ We learn that Mr. John P. Welsh of Oregon, has just purchased from Samuel Thorne, Esq., the young bull Grand Admiral, by Grand Turk from Agnes. He was to go out by the steamer of the 7th inst.

A New Barley Insect.

A new insect, which we regret to learn, is already committing serious depredations upon the barley crop in several parts of this State, is thus described by Dr. FITCH, in the just issued number of our State Society's Journal:

In October LEDYARD LINCKLAEN, Esq., of Cazenovia, sent to the Agricultural Rooms a few joints of barley straw, containing the cells and larvæ of an insect by which the growing of barley in his vicinity had been much affected, and, to some extent, injured that season, and had also been noticed there one or two years before. An examination of this diseased straw led me to the confident belief that the insect was the *Eurytoma hordei* of Dr. Harris, originally found in barley in Eastern Massachusetts, and which he subsequently regarded as the same with the "Joint worm" which of late years has made such havoc in the growing wheat in Virginia. A statement to this effect, I think, was published in the Journal of the Society at that time.

With the hope of obtaining some of the parasitic destroyers of this important insect, whereby to render its history more complete, a request was sent to Mr. LINCKLAEN, to forward to us a small quantity of this diseased straw. A parcel was thereupon received from him, which was enclosed in a glass jar. July 23d and 25th, 1857, the flies were observed hatched, and crawling about in the jar, coming out unusually late—probably from the straw having been kept dry. Other engagements were so pressing upon me at that date, that I was unable then to turn aside to investigate these insects. And it was not till now, that, on examining the contents of this jar, I find they lead me to far more important results than I was anticipating. I obtained from among this straw some sixty flies, dead, but otherwise in good condition for study; about a quarter of their number males, all pertaining to one species, no parasites having been developed among them. And these flies are clearly a different species from the one described by Dr. Harris, though affecting the straw in the same manner. And now that I come to see in such a number of specimens of these barley flies, and a still larger number of flies from the Virginia joint worm, which I have before me, how perfectly constant and uniform these insects are in the colors of their bodies and limbs, the fact becomes patent that the joint worm of Virginia is a different insect from the Massachusetts barley fly, and not a mere variety of it, as Dr. Harris regarded it. We thus have depredating upon barley and wheat, in our country, three different insects, closely related to each other, and hitherto currently regarded as but one species. As it will be a year before I shall have an opportunity of describing these insects fully, in my Annual Reports to the Society, in connection with our other insects injurious to grain crops, I here present the marks by which they are recognized and distinguished from each other.

These are small insects, little over the tenth of an inch in length, the shape of their bodies having considerable resemblance to that of a wasp. They pertain to the order *Hymenoptera* and the family *Chalcididæ*, and are the only insects of this family yet discovered which feed on vegetation; all the other species whose history is known, being parasites on other insects, feeding upon them internally, mostly when in their larvæ state, and thus destroying them. European naturalists, therefore will scarcely credit us when we say these barley and wheat flies are enemies, and not friends. But so much evidence has now accumulated upon this subject, that we can no longer doubt as to their true character. They are much more nearly related to the genus *Pteromalus* than to the genus *Eurytoma*, to which Dr. Harris referred them. Still they may differ from other insects of the genus *Pteromalus*, and should very likely constitute a new genus. But until I have an opportunity to give the species of this most intricate group a more thorough revision, I am unprepared to decide as to their true generic location.

The BLACK-LEGGED or Massachusetts BARLEY-FLY (*Pteromalus? hordei*, Harris) is black, its feet and knees pale, dull yellow, its *anterior shanks* of the same *dusky* or blackish color with the middle and hind ones.

The JOINT WORM FLY (which I propose to name *Pteromalus? tritici*) is black, its feet and knees and its *anterior shanks pale, dull yellow*, its neck with a dull white spot on each side.

The YELLOW-LEGGED or New York BARLEY-FLY (*Pteromalus? fulvipes*) is black, its *legs bright tawny yellow*, its feet whitish, its neck with a small, dull, white dot on each side. ASA FITCH.

Packing Eggs for Transportation.

MESSRS. EDITORS—As it may be of interest to those who wish to send eggs to a distance, I send you my mode of packing, by which they may be sent any distance, without danger of injuring their vitality.

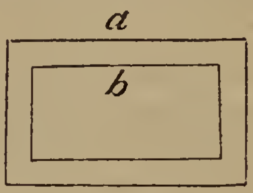


Fig. 1.

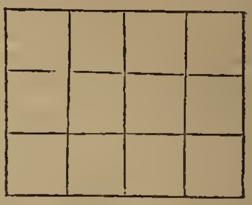


Fig. 2.

Each and every dozen is packed into a heavy pasteboard box divided into twelve cells, (see fig. 1,) one cell for each egg, so that there is no possibility of one egg touching another. To commence, I take out the divisions and put a row of wadding or batten in the bottom of the box, then replace the divisions, in each cell put an inch or so of bran, then place the eggs in end down, fill in around and cover the eggs with bran, then a layer of batten, put on cover and tie carefully. Then, where only one dozen is sent, put this pasteboard box inside of a wooden box of a size to leave about 1½ inches in the bottom and all round sides and top to fill in with bran or cotton. To make it all plain, see fig. 2—*b* representing the box containing eggs—*a*, the outer or wooden box. When packed in this manner, eggs may be sent with safety a great distance by railroad, stage or other conveyance—the double packing of bran being elastic, the eggs do not receive any injury, should the outer box receive a jar. Four dozen or more can be sent with as much safety as one, care being taken to pack them as seen in fig. 3, so that they cannot by any means touch or jar, the space between each box, and between them and the outer wooden box being filled with bran or some other soft, springy substance to break the jar received by the outer box. E. S. RALPH. *Buffalo.*

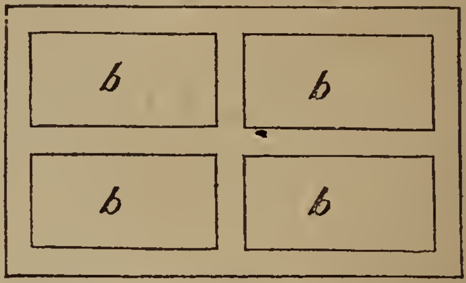


Fig. 3.

Substitute for Green Apple Pie.

EDS. CO. GENT.—The following recipe I have never seen in print, though known to many. There are doubtless many thousands of your readers who have never seen it.

For one pie of ordinary size, take one-half of a slice of a shilling loaf of baker's bread, (home-made wheat bread will answer,) one teacupful of hot water, one teacupful of brown or white sugar, one teaspoonful of tartaric acid, and mix together, and season with nutmeg or lemon.

The above recipe will be found a valuable one, especially at this season, as in many places green apples are scarce, and difficult to obtain. It is equal if not superior to green apple pie. J. B. STOLL. *American Hotel, Branchville, N. J.*

Climbing Vines.

A neat method of supporting climbers is to take a strip of two-inch plank, two inches wide, planed the full length of the board, and painted green, which set firmly in the ground. Next, obtain from a wooden-ware or toy store, two children's hoops, one the largest and the other the smallest you can find. Now suspend the small one as near the top of the pole as possible, by strings, and fasten the large one close to the ground. Plant your seeds around the outside of the large hoop, and when up, run strings of soft twine regularly from the top to the bottom hoop. It will look better to have the hoops painted green, and the twine should be dark, and not cotton twine. G. B. H.

Preserving Eggs and Bulbs.

Eds. Co. Gentleman—I noticed in your paper of March 17, a short article with regard to a communication which you had received from Mr. John H. Hall, of New-York, in which he claims "the discovery of the art of preserving eggs for an indefinite length of time, without the exclusion of light, air, or closing the pores." And it adds, that he has eggs that have been preserved by him nearly six months. I do not doubt it, yet I think I can beat him in length of time, and, perhaps, in the *simplicity* of the "art" of preserving. This day, March 26, we had on our dinner-table the "Yankee dish" of fried ham and eggs—and excellent it was too. The eggs were pronounced (by my husband and the rest of the family) to be *fresh laid eggs*. But I knew to the contrary, that they were not fresh, but were more than eight months old, preserved by the simple method which I have practiced for three years past with perfect success. I think I can safely assure your readers that if they choose they may, without the least trouble, preserve eggs perfectly fresh for any reasonable or necessary length of time, if they will manage them as I do. Which is simply this: Procure shallow baskets which are rather coarse or open, (they should hold about 8 or 10 dozen eggs;) carefully place the eggs in them, and without any covering, hang them on nails or hooks driven into the beams of the cellar. The lighter and more airy the cellar is, the longer the eggs will keep good.

I will also add, that we have found that the best way to keep Dahlia, Gladiolus, and other tuberous and bulbous flower roots, was to tie them with strong twine in small bunches, and hang them on the beams in the cellar, far enough apart so that the bunches do not touch. Of course, they have to be carefully labelled. We have practiced this way of keeping them for several years, and have not lost one bulb, and never the whole of a Dahlia root. We had fifty-seven fine Dahlias hung up in the cellar last November, which I carefully examined, a few days since, and I did not find one unsound tuber among them. Sixteen of them were seedlings which I raised last summer, and they looked as plump and fresh as when put into the cellar. M. *Champlain, N. Y.*

Cleaning Seed Wheat.

John Johnston of Geveva, one of the most thorough and successful farmers in this country, as all our readers know, says that he quit raising chess *twenty-eight* years ago—by never sowing it. He has not raised a bushel of it in all that long period on his extensive wheat farm. Thirty-seven years ago he obtained eight bushels of chess in every hundred of wheat. His mode of cleaning seed is the same in substance that we have practiced thirty years ago, but will bear repetition, and we therefore give it as recently described by him:

My plan is to take out the fanning-mill riddles; some call them screens; I call the lower one only a screen—it takes out mustard seed and cockle *in part*. After the riddles are out, take off the shaking rod, or at least the one nearest the wings or fans. Then let one man turn the wings or fans by the crank or handle, as usual; let another pour the wheat into the hopper from a basket or any other vessel—a tin-pail answers very well—let him pour the wheat in regularly and not very fast, if much chess. Let the man turning keep up a steady wind; he need not turn very fast. Have a boy, or a girl, or a man, or a woman, if you choose, to take back the clean wheat as it comes down from the mill, and I will guarantee that every chess seed will be blown out. The man pouring in the wheat ought to be *boss*, to make sure that the man turning does not slack up too much, or that he don't stop turning until the wheat and chess are all out of the hopper, else it may fall down amongst the clean wheat. If the wheat is 60 lbs. to the bushel or over, very little, if any, will be blown out with the chess. As considerable will lay on the cockle and mustard screen, when that is going to be put down it is safest to scrape back the upper part with the hand, because if there is chess anywhere amongst the wheat, it will be there. Now if this is done precisely as I direct, and if the wheat is not made entirely free of chess, unless three chess seeds are sticking together, which is sometimes the case with the top seeds on the main stalk, in which case there may be some left in the wheat; still a little more wind will blow them out. If any man will try it and cannot do it, send for me, and if I cannot do it to perfection I won't ask them to pay my traveling expenses.

Average Product of Cows.

This like all other productions will admit of various results. I should judge your correspondent "Native," did not live in this *country*, or at least it must be very near the *outside*, from his accounts of the proceeds of his cows and calves.

The farmers in this town give their whole attention to dairying. I will give you an account for their usual mode of managing, and the annual proceeds of some dairies. The cows begin to calve in the month of January, and where they can they like to get rid of all their calves before May. Their early calves are kept from six to eighteen weeks, and are then dressed and sent to Boston. Many commence making new cheese the first of April, some before, some later. When they commence as soon as the first of April they generally begin to send their cheese by the middle of May to market, and continue to send it every two weeks through the season, or till the first of December. You will perceive that a great deal of it is not more than two months old before it is sent to market. The average amount of cheese varies in different dairies from 300 to 500 lbs. to each cow, besides fatting the calf. The account of a good dairy would figure something like this:—

500 lbs. of cheese at 10 cts.	$50 00
1 Veal Calf.	10 00
	$60 00

It would probably vary from 40 to 70 dollars to each cow. J. B. B. *New Braintree, Mass.*

Average Product of 24 Cows.

Messrs. Editors—In the last Cultivator, you requested dairymen to give the average product of their cows. I cheerfully respond by giving my experience last year. My cows, 24 in number, averaged 172 pounds each, and we suffered from a very severe drought for two months, at that—172 lbs. each, at 24 cents, price sold for, amounts to $41.28 each for the butter, and we get about $1 each for *deacon* skins, and the calves that we raise we can sell in the fall for from $5 to $6 per head.

I consider the milk from a good cow, worth at least $5 to feed to calves or hogs. I think Native must have a poor lot of cows, or let them run in very poor pasture, to get only from $20 to $30 each. John Shattuck. *Norwich, N. Y.*

A Cow Worth Having.

Messrs. Luther Tucker & Son—The following article I copy from last week's "Madison County Observer." The statement can be amply proved if desired. Where Squire Hunt is known, his word will not be doubted. Gardner Morse. *Eaton, N. Y.*

"We have received the following statement of the amount of butter made during the past year, from a cow belonging to Otis Hunt, Esq., of Eaton Village:

Amount made from April 8 to July 8,	191 lbs.
" made during the month of June,	74 "
Made during the year,	516 "

Besides furnishing all the milk and cream used in a family of four persons all the time, besides comers and goers.

"The cow is of native blood, and we are assured that the foregoing is a fair average of the product of butter for years past. If the yield of milk was large in quantity, we can aver, from personal knowledge, that the butter made from it was good in quality."

Hens Eating Eggs.

In the Country Gentleman of March 24th, I notice an inquiry from "Down Easter," to prevent hens eating their eggs. I have been very successful in preventing it in this manner: Take a partially eaten egg from the nest, and substitute ground mustard for the yolk, and put the egg back again. I think one trial will prove sufficient. I have never been obliged to repeat it. Out Wester.

One of your correspondents inquires for a cure for hens eating their eggs. I have been troubled in the same way, and find no remedy so sure as the one I adopt for hens that will get into the garden and scratch up the new made beds. I hand them over to the tender mercies of the woman's department, where in the shape of a roast or a stew we make an end of them. T. L. B. *West Chester, Pa.*

A Productive Cow.

Messrs. Editors—Reading the account of the Oakes cow in the Co. Gent., in regard to her high qualities, brought to my mind the qualities of one that I now own. She was dropped from one my father raised. We call her Cherry. Well, Cherry was dropped in 1842 or 3—she dropped calves regularly until 1850. She then failed to drop them—had none until November, 1854. In October, 1853, she was so prolific in milk and butter, that my mother spoke of it. I asked her how much butter she was making. She did not know. I said to her, set in the 1st of November, and make every ounce you can through the month. She set at it. For three days we used no cream for coffee; the residue of the month we used it twice per diem, three in family. She made forty and three-fourths pounds of butter in the same month. No other cow on my farm to give a drop of milk. I know nothing of her grade or stock. She has not dropped a calf since 1854, yet she has never ceased to give milk. She has always been in good keeping—stabled all the time in winter, except when let out in the yard to water, and at night in summer. You can judge how far she would fall short of the Oakes cow. S. H. Beal. *Fluvanna, N. Y.*

To Make Cows "Give Down."

Messrs. Editors—I have observed the question going the rounds of the papers, "how shall cows be prevented from holding up their milk?" and various remedies proposed, none of which I believe were claimed to be infallible.

When a boy my business was to suckle the calves night and morning. I noticed after the calves were of some size, and when first admitted to the cows, and after, when the milk was nearly exhausted, particularly if the supply was scant, that they made a most vigorous butting of the cow's bags, causing them to kick about lustily.

I wondered why they should keep up such a butting, evidently very annoying to their mothers, and after much reflection I arrived at the following conclusion: That the muscles of the lower part of the cow's bag and teats are closely but involuntarily contracted to prevent the escape and waste of their contents; that the butting of the calf is instinctive on the part of the calf, to cause the muscles of the bag to relax and permit the milk to flow. The muscles of some cows' bags seem to be more rigid than others, and hence require more of the punching process.

Acting upon the suggestions hereby derived, the next time I began to milk a cow that refused to "give down," I most vigorously, with closed hand, tried to imitate the performances of the calf, and with the happiest results. And, Messrs. Editors, I have never failed with the most obstinate holders up, by this method, to bring the milk speedily down. A. S. Proctor. *Rome Farms, Ill.*

Best Three Shrubs.

There are many persons who have but a limited space for flowers and shrubs, and yet, for want of knowledge, occupy the little ground they have with common flowers and shrubs, while the same space could be occupied with choice plants, costing no more at first, and requiring no more time and attention. In place, then, of the lilac, syringa, and others of that nature, which, though very proper in extensive shrubberies, are entirely out of place in a small garden, we would put *Weigelia rosea*, *Deutzia gracilis* or *scabra*, and *Spirea Reevesii*. These are moderate in size, beautiful in foliage and flower, and with a little attention to pruning in the spring, can always be kept of a good shape. G. B. H.

Three Bedding-out Plants.

The *Verbena* of course heads the list. Nothing can surpass this. Care should be taken to pin down the shoots with little wooden sticks, as they immediately take root at the joints, and grow more vigorously. Next the *Petunia*. There are about half a dozen distinct and desirable varieties, blooming freely the whole season. The Heliotrope should by no means be omitted. Half a dozen plants will keep you in perfume a whole season—perfume excelling anything ever *composed* by Mons. Lupin. In my next I will treat of annuals. G. B. H.

Ground Cherry—Fig Tomatoes.

We endorse every word your correspondent Mr. Flemming, says of these two fruits, and sure we are they will sooner or later be much sought after, especially with apples as they sell here.

We grew quite a quantity of both the past season, and intend trying them for market the coming, more especially the fig or husk tomato. It does not belong to the tomato or Solanum family at all, but is a variety of the *Physalis*, but which we are unable to say. The fig tomato when cooked, especially partially green, has much the flavor of some plums; it contains much more acidity than the ground cherry, and hence by many likely to be more prized. They are both most bountiful bearers, and as we have said before, if they have any fault, it is that they seed themselves rather too freely; hence will cause a little more hoeing—but being an annual in nature, are not more troublesome than similar weeds. All those who have tasted preserves made from the fig tomato, pronounce it excellent. The keeping of the fruit in winter is a new idea to me, but from analogy can easily perceive they will do it. Edgar Sanders.

Early Tomato and Cabbage Plants.

Messrs. Tucker—I wish to say a few words concerning a subject of great importance at the present time—that is, to procure good, large, and healthy tomato and cabbage plants. Those that have hot-beds can have them easily. This is for those that have them not. Make or procure a small box—an old raisin box will answer for tomatoes—*bore ½ or ¾ inch holes all over the bottom*; fill nearly full of good earth. Now every farmer knows that in the spring, manure thrown out of the horse stable in a little heap, will in two or three days begin to smoke; set your box on the top of this; put your cabbage seed to soak in a little warm milk until some of the seeds begin to sprout; supposing that the box has been over the manure a few days, so that the earth is warm, sow the seeds, and they will be up in from two to four days. Remember to water well with *warmish* water, because the heat below soon dries the roots. It is not well to sow too early because the natural soil will not be warm enough to receive the plants. Believing that every farmer ought to communicate through the columns of the Agricultural papers, anything that they think would be a benefit to others. I write the above hoping that it may be of benefit to some, by its quickness, who have failed to raise plants in the usual way. D. McCullock. *Arcola, Va.*

Culture of the Onion.

Messrs. Tucker & Son—I have often seen the culture of the onion given in The Cultivator. Now I will give my way of raising onions. If the ground is wet, horse manure is best for it. Plow it in the fall, and let it lay till spring. But if it is a dry, sandy soil, common barnyard manure is the best. Put it on in the spring, and plow it 8 or 9 inches deep, and then rake smooth, and draw your drills 14 inches apart—after marking, let it lay to the sun a few hours, and then sow 6 to 8 pounds to the acre. Cover up the seed, and roll the beds with a light garden roller. When they come up, a top-dressing of wood ashes is very beneficial to this crop. Hoe and weed when needed, but not hoe too deep. Thin out to 2 or 2½ inches apart in the drill. At the last weeding, brush the dirt away from the bottom to give it a good chance to bottom above ground. I have not given any time to sow, as every one can judge for himself. George T. Osborn. *Pawling, N. Y.*

Best Three Herbaceous Plants.

First and foremost must be put the beautiful *Dielytra*—hardy as a peony, and infinitely more desirable, since the flower is much more elegant, and remains long in bloom.

Pyrethrum or *Double Feverfew*. By pinning the shoots to the ground as fast as they grow up, these can be made to cover a large space of ground, and when covered with their pure daisy-like double white flowers, are beautiful plants. They flower the whole season. They need, in this latitude, a little covering of litter in the winter to preserve them.

Delphinium Barlowi or *Hendersoni*, or Larkspur. These are beautiful varieties of this well-known plant, and remain in bloom almost the whole season. G. B. H.

Death of Col. Jaques.

Col. Samuel Jaques of "Ten Hills Farm," in Somerville, near Boston, about and concerning whom the readers of the Co. Gent. have been informed from time to time, departed this life on the 27th ult., in the 83d year of his pilgrimage. The Colonel, as your readers have already been informed, was in many respects a remarkable man—one whose knowledge, if judged by the books he had read, might be regarded as limited, but if tested by his knowledge of things as they really are—as they exist in nature, would be regarded far otherwise. He improved what every farmer enjoys, his opportunities for observation and experience, thus furnishing and storing his mind with useful and valuable knowledge. He resorted to the original sources, not being willing to take instruction second hand or from books, but interrogating Nature herself, and carefully noting and treasuring up her oracular responses. In this way the Colonel had acquired a large amount of information not contained in books, but found in the recesses of Nature, who yields her treasures to none but earnest seekers, and such she never turns empty away. In this respect the life of Col. Jaques is a model for every young man who desires to become useful, successful and happy.

The breeding of domesticated animals seemed to interest the Colonel more than any other department of rural life. In this he has done more to develop the laws of propagation, than any other man in this country. He has not only originated a breed of cattle, but has in various ways, tested and confirmed by demonstration, that breeding in-and-in is not only the best, but about the only way of improving stock with certainty. He owned for several years, that remarkable English horse, known as Bellfounder, or Norfolk trotter. He had in his possession for some time, the Sherman Morgan, the sire of the Vermont Black Hawk.

The Creampot breed of cattle, as heretofore stated, was made chiefly of the blood of Cælebs, a Short-Horn bull, a grandson of Comet, and two extraordinary native cows. He has bred in-and-in for nearly 40 generations, with constant improvement in symmetry, and no deterioration in constitution, as anybody can see who will look at the specimens still kept at his late residence. He was for many years a successful breeder of Merino sheep, as the premiums he received from the Society for the Promotion of Agriculture, abundantly prove. For further detail on these matters, the reader is referred to the back volumes of the Country Gentleman and the Cultivator.

The Colonel was remarkable, also, for his love of fox-hunting. Some still live who well remember the interest he formerly took in this kind of sporting. His horn, his hounds and his horse, were his equipments for this kind of enjoyment and recreation. He was always cheerful and full of life—active, vigorous and healthful, loved home and domestic scenes better than public life,—though public men were frequent visitors and most welcome guests at his spacious mansion. He frequently had the pleasure of entertaining the most distinguished gentlemen of our country. He enjoyed that rare and most un-American quality of not being an office seeker, though he had forced upon him the office of Inspector General of Hops, which he held from 1806 to 1838.

Notwithstanding the ups and downs of fortune which the Colonel shared, his life in this respect was a success, as he left his family a large and valuable estate. But had he left no property, the inheritance of his good name and virtues would be an invaluable legacy. While the surviving children mourn the loss of such a father, they may well rejoice in the reflection that to them the lines have fallen in pleasant places, and that they have a goodly heritage Columella.

Tobacco Culture in Connecticut.

Eds. Co. Gent.—A short time since I saw an article in the Country Gentleman of Dec. 9, 1858, entitled "Essays of Arator." You wish to know what Connecticut tobacco raisers think of Col. Taylor's views on the subject.

When we set out tobacco, we know before-hand what we have got to do. The Col. says: "Even supposing the crop to amount to the extraordinary quantity of 1000 pounds per acre," we would seldom, if ever, find it producing a profit on a fair calculation."

In Hartford county, (and I may safely say without boasting we raise the best tobacco in the country,) a man thinks his crop a very moderate one if it does not exceed 1000 pounds per acre. My brother and myself farm together. Our last crop was raised on a few rods short of 4½ acres, (measured with a Gunter's chain.) It was accurately weighed, and sold for 95 pounds less than four tons. The rust injured the crop somewhat, but we got $1,144.55, cash on delivery.

So much for that part, and now about its killing the land. Our system is—put about 30 loads barnyard manure mixed with muck, on an acre; plow it in well, and thoroughly harrow the land; then take a small plow and make a furrow; put in guano and plaster at the rate of 300 pounds each per acre, and plow two light furrows on the top of it. The hills are made with a slight spat of the hoe on the ridge, about 20 inches in the row, and 3½ feet the other way.

We use the land two years in succession for tobacco, and then seed down to grass with rye, and we have good rye and good grass.

The labor on our crop was done by three men and a boy, who in addition took care 7 acres of corn, 9 of rye, 7 of oats and 2½ of potatoes, besides cutting 25 acres of grass. Men in our town have raised the past year 2,200 pounds tobacco per acre and sold the greater part of it for 20 cents per pound, too.

It don't do, Messrs. Editors, to tell Connecticut men that raising tobacco don't pay.

I am acquainted with a man of truth and veracity, who told me he had raised tobacco for nine years in succession on the same land, and got never less than 2000 pounds per acre.

Perhaps I should have said that the land in this town is generally sandy, or sandy loam, and dealers say it raises the finest quality of tobacco. A Young Farmer. *Simsbury, Ct.*

Common Cattle for Oxen.

Messrs. Luther Tucker & Son—I send on for the columns of the Country Gentleman, my experience in regard to the superiority of the common scrub stock, over that of large thorough-bred cattle, for oxen. Now for the proof of my theory. I usually feed about 80 or 90 cattle during the winter, which requires my oxen to do a great deal of traveling, often over frozen ground, in the field, and along rough or rocky roads. For work cattle, I have always used what in Kentucky are termed the scrub or mountain cattle. These cattle are far more hardy than the thorough-bred; more active and capable of fatigue, from the fact that their feet remain uninjured in traveling over frozen or rough ground, in such situations as would ruin the feet and disable our large Durham cattle. I have now six oxen of this kind—have been feeding and wooding with them all winter, and for endurance and activity in performing a given amount of work in a short time, would not give them for the largest Durham or thorough-bred cattle. Isaac P. Shelby. *Ruemont, near Lexington, Ky.*

Pitching Hay by Horse Power.

Every farmer who has ever pitched off from a wagon in one day ten or twelve tons of hay, is aware that no labor on the farm can be more fatiguing. The common horse-fork, which to a considerable extent, has been brought into use, has afforded great relief, this severe work not only being avoided, but much greater expedition attained. The effective force of a horse is at least five times as great as that of a stout man; and if half an hour is usually required to unload from a wagon a ton of hay, then only six minutes would be required to accomplish the same result with horse power. Actual experiment very nearly accords with this estimate, five to seven minutes only being required by the assistance of the best horse-forks.

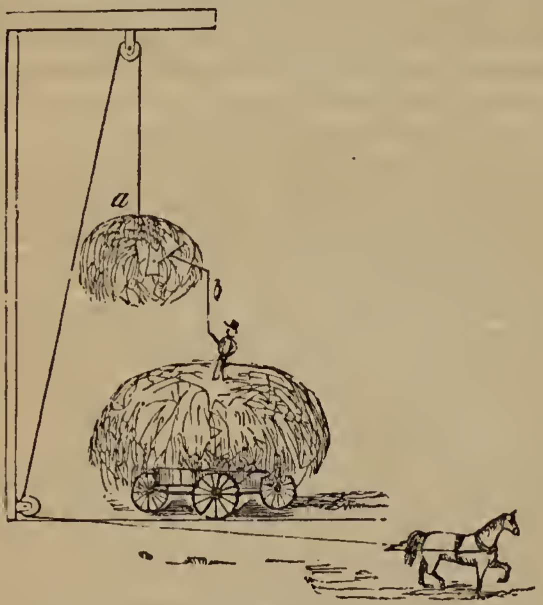


Fig. 1.

The accompanying figure (Fig. 1,) shows the common implement, and the mode of using it. Fig. 2 is an enlarged representation of the rake. The head is about 28 inches long, and has steel prongs of 20 inches. The rope attached at *a*, or as it should be, rather nearer the rake, passes over the pully above, by which the fork, after being thrust into the hay, is lifted by the strength of the horse, outside the barn-door. The fork is kept in a horizontal position and the hay retained upon it by the cord *b*, until high enough, when this cord is slackened, and the hay accordingly deposited or dumped. The horse is backed and the operation repeated.

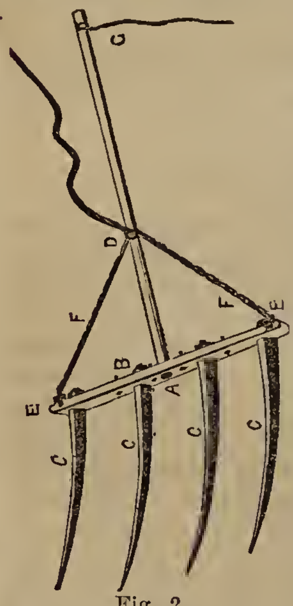


Fig. 2.

There are however some difficulties in the use of this fork. The most so results from the necessity for the handle of the fork to sweep upwards in a vertical position whenever the hay is dropped from it—and falling back it is in danger of striking the operator. It is hence impossible to use it under a low roof, beyond perline beams, or when the mow is nearly filled. To remedy these difficulties, C. E. Gladding of Troy, Pa., has recently constructed a fork (Fig 3,) which after a recent trial, we are satisfied is an important improvement. It differs from the common horse-fork by placing a hinge joint at the connection of the head with the handle; so that at any moment, by a jerk on the cord which passes up a bore in the handle, the fork is dropped, as shown in Fig. 4, and its load deposited. This may be done instantaneously, at the moment it happens to be swung to the most favorable spot. The fork is so hung that its weight causes the head to fly back of its own accord and resume its former position,—where it is held by an iron catch until the next forkful is to be discharged.

Fig. 3.

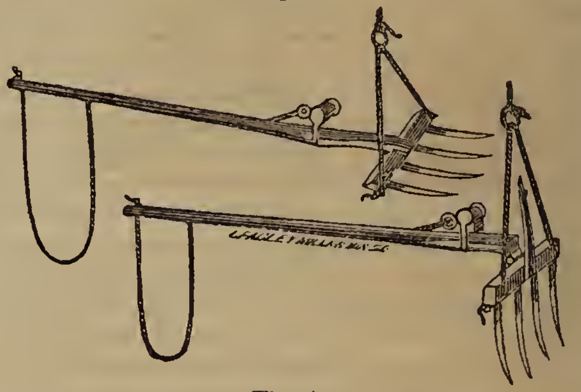


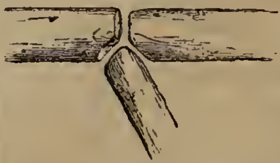
Fig. 4.

It should be observed, that the rope suspending the fork should be fastened to the highest portion of one of the rafters over the mow, and a smooth board should be placed vertically against the face of the mow, for the hay to slide against in its ascent. By attaching this rope in front of and within a window, the hay is carried with ease into the window, and thus lofts over sheds, carriage-houses, &c., where the common horse-fork could not be used, are filled by the use of Gladding's improvement. It may (as well as the old fork) be also used for stacking, by making a tripod of three long poles, from which to suspend the implement.

We are informed that the inventor of this improvement intends to furnish this fork, with the necessary ropes, pulleys, &c., complete, for the moderate sum of twelve dollars—which we think would be saved in labor in a single season on any farm of considerable size—a remark which will indeed apply to either this or the old horse-fork—both of which are great savors of labor.

Uniting Side and Main Drains.

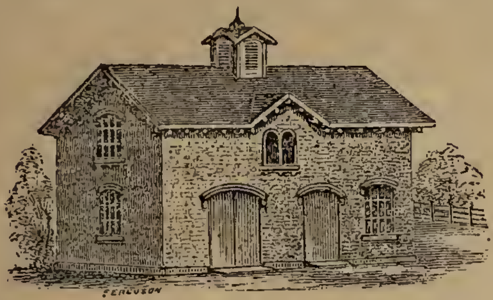
In my reading on the subject of laying tile in underdrains in Rural Affairs and in Colman's, Munn's treatise, &c., I have failed to learn the manner of entering the small tile of side drains into that of main trains. I could do it, but I will be extremely obliged if you will post me up on the subject, or refer to any work from which I could learn the *best* mode of doing it. A. Berry. *Raymond, Miss.*



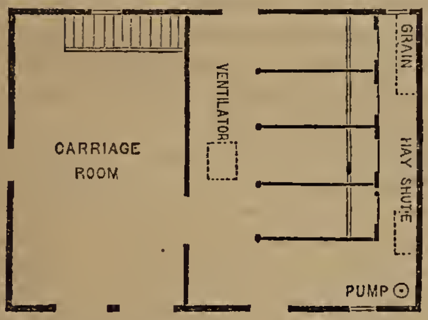
Break off a portion of the ends of the larger tile, and place them as shown in the annexed figure, leaving a hole into which the smaller tile is thrust about as far as the figure exhibits. Then cover the whole joint well with a small flat stone or two, and apply the straw preparatory to covering with earth. The bottom of the main tile should be at least an inch or two the lowest, so that the side drain may afford no obstruction to the main current.

A Horse and Carriage Barn.

During a recent visit to a friend, we observed an unusually neat and convenient brick horse barn and carriage-house which he had recently erected. It was constructed with an especial view to cleanliness and perfect ventilation. Its dimensions are about 22 by 36



feet—it has four horse-stalls, surrounded on each side with open passages, admitting freely both light and air. Hay from the "hay-shute" drops from the loft above into the feeding passage, and is readily given to the horses through broad openings in front of their heads, about four feet high. These openings are substantially lined with thick sheet iron to prevent gnawing. The partition containing these openings does not extend up to the ceiling above, and the partitions between the stalls are only high enough to effect a proper separation,



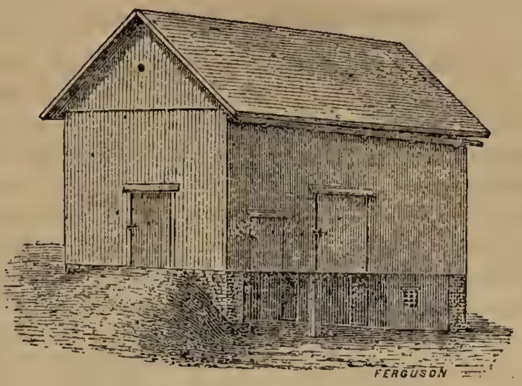
allowing a free circulation of air. The passage over which the ventilator is situated, is used for clearing away the manure. The ventilator passes up through the center of the hay loft, and supports the roof. A harness and saddle room is under the stairs. A large cistern holds water enough for the use of the horses, as it is brought up by a pump at the end of the feeding passage.

Phloxes.

It is strange that this beautiful class of herbaceous perennials is not more generally cultivated. More attention is paid to the growth of them than formerly, it is true; but still there are very few gardens which boast of more than the old two varieties of white and pink Phloxes, known by most persons only as the "French Willow." These persons may be surprised to know that there are several hundred distinct varieties now cultivated. Elwanger & Barry, in their Catalogue for the present year, have one hundred and fifty-five named Phloxes. The period of flowering has been gradually extending, until it reaches from July 1st to the time of severe frosts. There are also several sorts of creeping Phloxes, blooming in May or June, and which propagate themselves by runners.

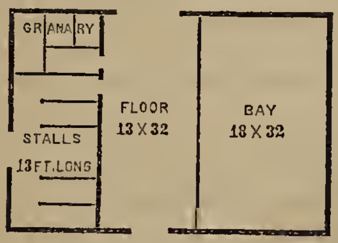
The Phlox in all its varieties, is perfectly hardy, and requires no care whatever, except that the plants should be divided (either in the fall or spring,) every three or four years.

The Phlox Drummondii is one of (we are tempted almost to say,) *the* most beautiful annual with which we are acquainted. Grown in a mass in a border by themselves, nothing can exceed them; as they embrace every variety of tint, and are in bloom for a period of at least three months. G. B. H.



Barn for a Small Farm.

The accompanying plan and view represents a barn adapted to a farm of moderate size, erected by E. W. HERENDEEN, of Macedon, N.Y., on a tenant farm in an adjoining township. It is neat and compact, and has been found to combine many conveniences for a barn of such moderate expense, the whole having been built for about five hundred dollars.



It is 32 by 44 feet, and with posts 18 feet high. It is very substantially built—the siding being vertical unplaned boards—the doors hung on iron rollers—and the floors made of two inch pine plank, planed and matched. The basement is occupied as cow stables and shed. The horse stables are above, experience having proved that horses are healthier above ground. The stable door is at the end of the building, as shown in the view; and directly in front of this door is a wide stall, admitting a span of horses in harness side by side when desirable

Notes about Potatoes.

MESSRS. EDITORS—In the April No. of THE CULTIVATOR, C. W. G. asks if the Chenango and Mercer are the same potato? I have often heard them called, by some of the agricultural papers, the Mercer, Chenango, or Shenango, and the Neshannock—the latter name is what they are called here, where they originated, in Mercer county, Pennsylvania, a great many years ago, from seed, by Mr. GILKY, on his farm near the banks of the big Neshannock, from whence they derive their name. Their origin on the Neshannock being but a few miles from where it empties into the Chenango river, may be the reason of their being called by that name sometimes. Very few kinds of potatoes have been so highly valued as the Neshannocks, and they are found in every section of the Union, either growing or in their markets. However they are not as prolific as some other kinds, and are subject to rot some seasons, but for the last two or three years our crops have not been much injured with the disease; but some five or six years ago potatoes were almost a total failure here. I tried a great many kinds, to find some one that would be exempt from rot. I found the Rough Purple Chili to make a good crop, clear of rot, two years in succession, when all the other varieties that I had planted in the same field rotted so that I never dug them. The Neshannocks that I have met with in different sections of the country, are somewhat different from our old original, both in shape and color. At present I cultivate none but the Chili and a few of the Prince Alberts. The Chili are an excellent cooking potato, and will yield more from the same amount of seed than any other kind that I can get. J. A. NELSON. *Mercer, Pa.*

Culture of Spring Wheat.

Where winter wheat can be grown, spring wheat receives but little attention. There is a very good reason for this in the fact that the winter grain is almost invariably of superior bread-making qualities. But of late years, the culture of the spring variety has largely increased—the failure of the better kind having become very general over its former most favorable localities. In the hope of escaping the ravages of the wheat midge and Hessian fly, farmers have turned some attention to spring wheat—a hope which a better knowledge of this grain proves of slight foundation or importance. The experience of late years has enabled us to give its proper position to this crop, and taught us that while *soil and culture* have very much to do with success in wheat-growing, wherever sown, or of whatever variety, that the *accidents* of season and insects cannot be wholly guarded against by human labor or foresight. Still many among us will sow a few acres of spring wheat, and will hence be interested in a few remarks on its culture.

1. The soil most suitable for spring wheat is a deep loam, with some portion of clay, but one in which neither sand or clay have a large predominance. Heavy clays and light sandy soils give but inferior crops, as also those of a low mucky character. We have grown very good crops on a gravelly loam, sowing after corn or potatoes. An active, or warm quick soil is required—as the crop has only about three months in which to come to maturity. This fact should also be kept in mind, as it is an important consideration.

2. The preparation of the soil should be of a thorough character. A clover ley turned under carefully in the fall, and then thoroughly harrowed or cultivated in the spring, is thought very favorable for producing a good crop of spring wheat. Corn or potato ground, of a suitable soil and in good heart, we should prefer for our own sowing. Let it be well plowed, and brought into fine tilth before sowing. Other stubble lands, needing to be manured for this crop, would generally be more uncertain than either of those above named. The manure applied should be pretty well decomposed, and the plowing and preparation such as to ensure a mellow soil. Guano, poudrette, and other concentrated manures, might be employed in this case with good effect.

3. Sowing, it is very generally agreed, succeeds best very early or very late, where injury from the wheat midge is apprehended. This insect has a certain period in which a greater part of its depredations are committed, slightly varying in season, and continuing about twenty days from the middle of June. Late sowed wheat is more subject to injury from the Hessian fly. As to the manner of sowing, it is essential that spring wheat be covered to as nearly an even depth as possible, otherwise it will not ripen together. Hence the seed should either be drilled in, or great care taken in harrowing down before sowing, so as to cover at equal depth as far as may be.

4. The varieties of spring wheat are numerous; but those now most popular are the Fife, Club, China Tea, &c. The first is highly commended for late sowing; the second seems to be deteriorating in many places; the latter has recently been quite successful in some sections of Western New-York. We cannot pretend to say what variety would prove most successful in any locality—experience should be consulted and regarded. So also in regard to soil and culture; and it may be well to add that our remarks are meant for sections where spring wheat has but recently been introduced.

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Grass Culture in New-England.

We last week offered some thoughts on grass culture, intending then to leave the subject with our readers and correspondents; but having since seen reports of the late discussion by the Mass. Legislative Ag. Meeting on this question, will glean some facts and figures therefrom throwing light upon it.

The chairman, Hon. J. W. Proctor, thought clover, timothy (herd's grass) and red-top, were the best species for hay. Instead of sowing hay seed with wheat or oats in the spring, as formerly, he now plowed and seeded in August, and the practice would become more common as its benefits were realized. This method produced from one and a half to two tons per acre. The latter yield was obtained in Marblehead, by the use of sea-weed as a top-dressing, applied after the summer crop was removed.

Mr. B. V. French argued the general necessity of drainage for the production of grass and hay, especially of swamp meadows and pastures.

Mr. Lawton of Great Barrington, had cultivated land for hay for thirty years without breaking up, and had realized as much as two tons per acre—which he thought worth fully as much for feeding stock as a larger crop. To give the best quality of hay, the grass should stand up well, and much more than two tons to the acre will not do this; if it falls down, it has less nutriment. When he prepared land for hay, he drained, plowed deep, harrowed well, used ashes and compost, and planted corn, plowed again in the fall and manured with compost, and sowed down with timothy, red-top, and clover. He had less success with grass sown in autumn than in spring. Grass sown in spring without grain, the ground manured, had produced a ton and a half to the acre the same season. He top-dressed his meadows every second year, and disapproved of plowing in buckwheat as a manure—it produced an acidity in the soil unfavorable to the healthy growth of grasses. He had underdrained soft meadow land, and also wet upland, with great profit. Irrigation was practiced somewhat in his section, and was of much benefit to grass in its earlier stage.

Mr. Wetherell of Boston, said that in some of the central counties of the State, there were lands which yielded two crops every year, or three tons per acre the season. They were top-dressed every other year, and were not fed with cattle. The rule was to apply this dressing (of barn-yard manure) as soon as the crops were taken off, and they were never plowed or broken up. Clover, red-top, and timothy, were the best kinds to be used for seeding land.

Other topics and other speakers are mentioned in the reports, but we note only those matters most pertinent to our general subject.

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Cracked Hoof.—Allow me to inform J. S. P., if he will take a thin, sharp furmer or chisel and mallet, and cut the width of the chisel, say 1¼ inch wide, next the hair, above the crack crosswise and keep the hoof closed together by means of a round shoe, and soften up the hoof with white pine pitch, which he can obtain from the end of pine saw logs at any sawmill where the logs can be found, or he can soften it up with blue clay and fresh cow manure. A. L. *Mexico, N. Y.*

New Publications.

Essays on the Soiling of Cattle, Illustrated from Experience; and an Address containing suggestions which may be useful to Farmers. By Josiah Quincy. Boston: John Wilson & Son.

The first of the two Essays contained in this handsome volume, was prepared by its venerable author as long ago as 1819, at the request of the Agricultural Society of Massachusetts. The second was written in 1852, and the two, together with an address delivered just forty years ago, comprise a valuable review of the system of soiling, as well as hints as to other means for the promotion of Agriculture, and we shall hope especially on the former subject, to present some considerable extracts to our readers. For the copy of the book before us, we are indebted to Hon. Josiah Quincy, Jr.

The American Home Garden. Being Principles and Rules for the Culture of Vegetables, Fruits, Flowers, and Shrubbery. To which are added Brief Notes on Farm Crops, with a table of their Average Product and Chemical Constituents. By Alexander Watson. Illustrated. New-York: Harper & Brothers.

We copy above the title of a new book which has been awaiting notice for a week or two, and which appears to be a most useful addition to our rural literature. It is embraced in 530 pages of clear type, and although we have not yet had time to examine it closely enough to be able now to criticise scrupulously its minor points, it seems to us to be eminently practical in design and clear in execution, while its scope is one that no previous work in our knowledge exactly fills. [We have ordered a quantity, and will send post-paid on receipt of the publisher's price, $1.50 per copy.

Notes from Correspondents,

Value of Ag. Papers.—Enclosed please find $2 to pay for "Co. Gent." the current year. I have taken the paper from the first number, and have some money still in my hands belonging to it, which I shall continue to remit yearly so long as the paper and myself live.

For the benefit of those farmers who think Ag. Papers of no use, I will tell you how I got this money. Four years ago last fall, I bought some fine Leicester sheep. The first winter was cold, and not having provided any roots, the sheep had to live on hay. In February one sheep was taken sick with a disease of which I knew nothing, and died the second day. A few days after, I had been to the post-office and got the Country Gentleman. While reading it, my man came in and said another sheep was sick. I was then reading an article describing a disease among sheep called *stretches*. I took the paper, went to the barn, and found the sheep in the condition described by the paper. I gave the remedy, (Castor oil.) The next day the sheep was well, and in March brought me two lambs that I sold for ten dollars each, and I would not take ten dollars for the sheep now. So I think I could put thirty dollars to the credit of the "Co. Gent." This is one of many valuable items got from Agricultural Papers. J. W. K. *Toledo, O.*

Barley.—I send you a sample of pure hulled barley, as taken from the thresher. It is entirely new to me, though it may not be to yourselves. Some years since, a friend of mine received from Salt Lake, some barley which he sowed, and from its product picked something near a gallon of the hulled barley, which he sowed, and from which he raised about two bushels. From that quantity, if I have not been misinformed, he raised forty bushels last year. I have sowed five bushels this spring; and the result I will give you next fall.

Grafting Wax.—I notice in No. 8, Feb. 24, p. 129, a recipe for making grafting wax. I take one pint of linseed oil, 3 lbs. rozin, 1 lb. beeswax—melt well, and pour into a vessel of water—grease the hands and pull until white. I have been using it for several years, and prefer it to any other. Vegetable oils stand the weather better than animal.

Hungarian Grass.—I sowed last year half a bushel of Hungarian grass-seed on one and a half acres of ground. Having no means of weighing, could not tell how much per acre, but double the quantity of timothy I ever raised on the same quantity of land. A great deal of it was grown for sale in this county. Both farmers and livery-stable keepers are much pleased with it. For hay, sow one bushel to three acres—less for seed. Sow any time from the 1st of May to the last of June; put in shallow. As a feed, I prefer it to any kind of grass or small grain. It sells for $15 per ton—timothy and common late millet, $10 to $12 per ton. Jas. Doneghy. *Independence, Mo.*

Onion Culture.—On page 203, vol. xiii, no. 13, I find instructions about the culture of the onion. Mr. W. says the drills need not be more than eight or ten inches apart. Such has not been the experience of careful cultivators in this vicinity, where as much attention is paid to growing the onion as any where I know, and where they are as careful to get all they can from their land. From 500 to 700 bushels of merchantable onions is looked upon as a good crop, upon land well prepared and highly fertilized. Rows 14 inches apart has become an established usage. If a less distance would do as well, I think our cultivatiors would have discovered this. They are careful to raise their own seed, and to sow none that has been on hand more than a year. In selecting onions for growing seed, they are careful to pick out the form and size they wish to raise. But first of all they are careful to keep their land clear of weeds. Essex Co. *Mass.*

Missouri.—Farmers and mechanics of all kinds can do no better than to emigrate to Missouri, as lands are cheaper here than in any of the free States of the Union. Missouri has a good climate, and a soil, deep, rich and strong. C. F. H. *Novelty, Knox Co., Mo.*

To Kill Live-for-ever.—I have seen inquiries how to kill live-for-ever. I think a good way to do it, is to collect a heap of old stumps and rough wood—cover this with the turf of live-for-ever, and set fire to it. You will thus get rid of a pest, and have a fine heap of manure. J. W. Lequear. *Frenchtown, N. Y.*

The Hog Cholera.—Hogs are dying in this vicinity with "the disease," and by starvation. There was not a bit of mast last fall, either oak or beech, and no fruit of any kind. I know of one man who has lost 21 hogs out of 40—another has only 11 left of 40—another only 21 of 60—another had seven in a pen fattening, and they all died. J. J. Craig. *North Madison, Ind.*

Management of Heifers.—D. M. N. inquires "if it is best to let his heifer go dry after her first calf." I will give him my experience, which has been for the last ten years, to have my heifers drop their first calf at two years old, and if possible to have them come in when they can get a full bite of grass, which has a tendency to make large udders. Let the calf follow her, say five or six weeks, and then wean, or sell to the butcher. I then milk her until about three weeks before she has her next calf. I prefer to have her farrow for one year—she will then be four years old. I choose this course for the reason that they make better cows to come in at two years—not so *steery* looking. The next year, being one of comparative rest, nature has time to restore her exhausted energy, and to increase the animal to full size. When heifers are milked a short time with the first calf, I have always found them to be short milkers, falling off about the same length of time they were milked with first calf. J. C. H. *Chesnut Ridge.*

Flat Feet in Horses.—I would inform E. R. B. that it will not answer to let the shoe rest upon the frog, (or in other words, the frog upon the shoe,) if so the horse will be lamed. He can grow out a new hoof in three months. Make a bed or box of blue clay and fresh cow manure, and make your horse stand in it as much as possible, and keep your blacksmith from paring away the heel of the hoof, and your horse is well. At the same time annoint the hoof close to the hair, with white pine pitch from green pine trees or logs. Careful usage and kind treatment is necessary. A. L. *Mexico, N. Y.*

Dissemination of Weeds.

A young farmer once remarked to us that he had no doubt that new plants were constantly springing up everywhere, and that at least one plant could be found on every farm, wholly unknown elsewhere. Every one having the least knowledge of Botany is aware that this opinion is simply absurd; and that a new and undescribed plant, even after searching a broad continent for it, is a rare thing. Others again are sure that one plant often changes to another—which, however, they would not admit in the case of animals. A friend once expressed in strong language his view of the fallacy of this notion—"Only admit," said he, "that one distinct plant is transmuted to another, and soon the whole face of the globe would be such chaos that the Creator would not know his own works!"

We have at different times had occasion to observe the springing up and growth of great crops of certain weeds, when it was impossible to say how the seeds could have been placed there. In one instance, an old grass field was plowed in spring, and a dense growth of the common pig-weed grew on the inverted sod; in another case, a meadow which had been in grass many years, yielded when plowed a profuse crop of foxtail. Yet this did not lead us to doubt the immutable law that all plants "yield seed after their kind," and that to "every seed is given its own body" or identity. And if, being on the spot, and constantly observing, was not sufficient to enable us to explain all the secret causes which operated in spreading or preserving seed, a stranger a thousand miles off, could not of course examine very thoroughly into these causes.

This brings us to what we wish to say in answer to the inquiry of our correspondent, E. Link of Greenville, Tenn. It appears that he sowed wet land with timothy, which was immediately followed by a great crop of chess; that the chess was mowed, and timothy took its place. He "looks upon the doctrine of transmutation as a heresy;" and of course does not believe that the timothy changed to chess, and then chess back again to timothy; but he wishes to know how the chess seed got there. We could mention several ways by which this *might* be satisfactorily explained, but none of them might be the true one; and as we always prefer facts to guessing, it is needless for us to enter the field of conjecture, with so little information as to all the local circumstances of the case. We have on former occasions explained the many insidious modes by which the seeds of chess are spread entirely unknown to ordinary observers, and it is not necessary that we should repeat them here.

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Cultivation of the Cranberry.

In answer to J. G. Norman—the art of cultivating this plant artificially is perhaps yet in its infancy. While some cultivators have been completely successful, others with nearly similar treatment have failed.

It is not improbable that there may be some hidden quality in the soil that has an important controlling influence—in the same way that while some rich calcareous soils are poison to the laurel, there are other soils on which it will flourish with great success.

Attempts to raise cranberries on strictly upland soil have generally resulted in failure. Where successful, the plants have needed careful cultivation, and would not endure neglect; and the soil instead of being dry, has been of the character of moist meadow land. The best soil is said to be beech sand—or this applied several inches over a swamp surface. The clear sand not only seems best for the growth of the plants, but prevents the entrance of weeds or grass. Peat often affords a fine soil for the cranberry, if after the roots of trees and bushes are cleared away, the whole surface is pared off so as to remove grass, plants, &c., and leave a clear surface, which before planting should be exposed to the weather one year to soften and crumble it. Water *is always* necessary, but stagnant water must be avoided, and there should be sufficient drainage for the overflowing water to be drawn off at pleasure. Clay soils will not answer. Rich alluvions will make the plants grow too luxuriantly, and manure will either destroy them or induce them to run all to stems or vines.

Formerly the practice of setting out in sods was preferred, but as this mode also introduces all the weeds and grass that happen to grow among them, the practice is now preferred of separating the plants. The nearer together they are placed, the sooner they mat the surface, but two or three feet is a common distance. It is important to procure the most productive plants, as some, although growing luxuriantly, produce but few berries. Among others who keep them for sale, D. L. Halsey of Victory, Cayuga Co., N. Y., has a fine sort. We would recommend our correspondent to procure and read Eastwood's treatise on Cranberry culture, published by A. O. Moore of New-York, and sent by him by mail on the receipt of fifty cents. We should also be glad to hear from any of our correspondents who have been successful in planting out and raising the cranberry.

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Wool Table.

Eds. Co. Gent.—I send you a description of a wool table we have been using several years with satisfaction. It consists of four boards, six feet long and one foot wide, with the exception of the board for the bottom of the box, which is ten inches. This is large enough for Merino fleeces weighing four to six pounds; twelve inches would be sufficient for the largest coarse-wooled fleece.—These are laid on two pieecs of 3 by 5 scantling, three feet ten inches long, and the first, (A,) and third one, (B.,) Fig. 1, (the bottom of the box,) are nailed; the other two boards (C. C) are fastened to B. with hinges. D. is a piece of board nailed at the end of B. to bring the sides of the box (C. C) against, which are held there by catches.

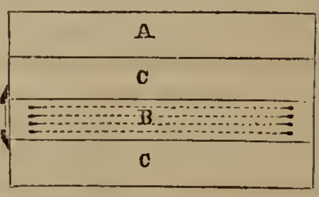


Fig. 1.

It is supported by four legs which are movable, and when stored away, occupies but little space. The twine is passed up through the bottom of the box near D., and across the bottom in grooves, so that the wool will not disturb them, and fastened by drawing them down in notches made with the saw. The dotted lines show the grooves.

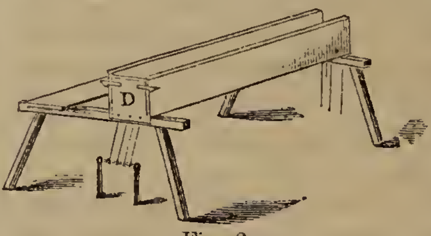
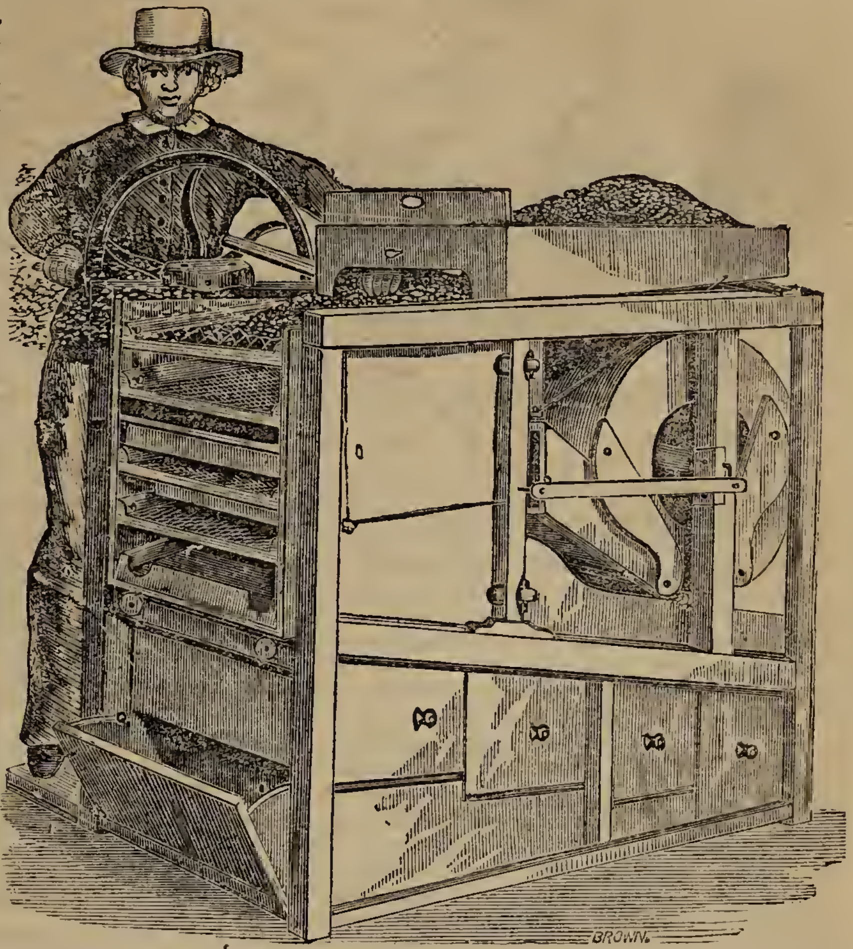


Fig. 2.

In using, the fleece is laid on in the usual way, and the sides rolled together; then the sides of the box are raised and held by the catches, (forming a box;) the fleece is then rolled so as to leave the shoulder exposed to view, and tied; the catches are then raised, and the sides of the box drop, leaving the fleece at liberty on top of the table.

The advantages of this table over those commonly used with a box at the side, are, the box at the side is in the way when rolling the fleece; it saves the trouble of working the fleece in and out of the box, besides often tearing it, and is much easier to construct, and less expensive. M. *Catherine, N. Y.*

Nutting's Fanning and Assorting Machine.



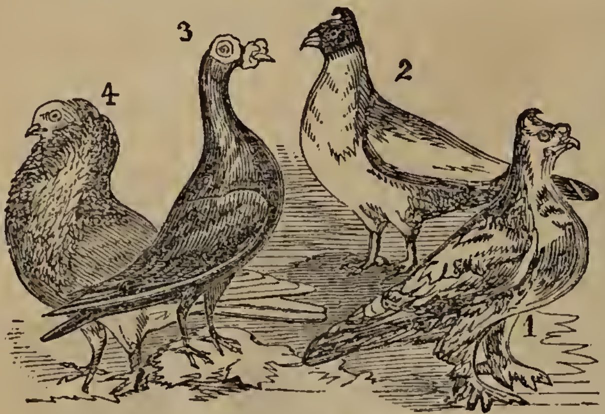
This is a remarkable invention. The common fanning mill has now been in use some forty years with but little variation or improvement in its leading features. A great advancement is now made by the introduction of a new principle, in the character of the screen employed. The old screen is simply woven wire. Nutting's screen is formed by pressing the woven wire, so as entirely to remove the feeling of roughness perceived in passing the hand over the surface. All his screens have almost the smoothness of glass—and bear the same relation to the old ones, that glazed muslin does to coarse bagging. Three important ends are thus attained. First, as the wires adhere to each other at their crossings, the meshes become immovable; and once adapted to the size of the grain, they always remain so. Secondly, as the wires cannot slide, the screens remain perfect, and their durability is almost without limit. Thirdly, and most important of all, their glassy smoothness allows the seeds to slide over them when but very slightly inclined from the level, whenever any vibratory motion is given to them. The seed never falls from above directly upon these screens, but first upon smooth metal plates, flat with the screen, in passing over which and on the screen, every oblong grain has assumed a horizontal posture. If then, these grains are *longer* than the meshes, they slide over them; if shorter, they drop through. Take, as an example, a mixture of spring wheat and oats, which is very hard to separate, as the grains are about the same size, except that the oats are the longer. A screen is used whose meshes are longer than the wheat grains, but shorter than the oats. The latter, of course, slide over and the former drop through, and the separation is perfect. Another screen separates chess from wheat in the most complete manner. Every other kind of foul stuff is cast aside in the same way; advantage being taken not only of the *size* and *weight*, but of the shape.

A most important office performed by this machine is its assortment of different sized seed of the same grain. For instance, take a bushel of wheat, the grains of which, to a casual observer, appear to be all of the same size. Pass it through the proper screens, and one drawer will be found to contain only the largest, ripest, and plumpest grains; the next drawer will afford a good specimen, but all the grains will be smaller than the first; the third will be of an inferior quality; and the fourth only the shrivelled portion. We look upon this result as likely to effect improvements of the very highest character in our agriculture. An experienced farmer declared, on witnessing its performance, "*I can now secure the wheat crop completely from the midge!*" He expected to accomplish this end by selecting the very largest grains for seed, which, of course, would be from the earliest and most perfectly ripened plants. Repeated sowings would improve the variety so as to escape the insect. All the grain we sow for seed may thus be continually improved. A new world of advancement seems thus opened before us.

There are several smaller advantages of Nutting's machine. It runs with very little noise; it is smaller than the common fanning mill; its vibrations are very short and quick, having more of a tremulous and less of a shaking quality than the common fan; the wind is shot more nearly upward against the bottoms of the screens, thus separating the chaff alike from all parts; and the quantity and direction of the wind, as well as the degree of motion in every part, are most completely controlled. The price is not greater than that of old fan mills. The inventor, RUFUS NUTTING of Randolph, Vt., spent, as we are informed, some three years of thought upon it, and the machine certainly shows that a great amount of hard thinking must have been required to perfect all its parts. With the exception of New-England, the right of which is retained by the inventor, the patent for this country is owned by WALLACE WARREN of Utica, and we unhesitatingly recommend it as no humbug.

Emerys' Illuminated Catalogue.

The new catalogue of EMERY BROTHERS of this city, is the most richly illustrated work of this kind that has yet appeared in this country. There are seventeen full pages, representing various agricultural implements and machines, most of them as seen in motion, and in a good style of wood engraving. One page alone exhibits 43 different tools. There are 30 pages more of description, explanations, &c., the result of the eminent skill and knowledge of the proprietors on these subjects, and which will be found interesting and valuable to farmers and implement makers. Its typographical execution is nearly perfect. A copy is sent by mail, by the proprietors, if we mistake not, on the receipt of six cents, and would be worth for its facts, at least ten times as much.



Fancy Pigeons.

No. 1. Trumpeter—2. Nun—3. English Carrier—4. Jacobine.

No. 1. **Trumpeter.**—This bird is above the medium size of domestic pigeons, and is rather clumsily built. We have seen several theories to explain its name, but are unable to determine whether either is correct. Its note when cooing is rather coarse and heavy, but no more so than its size would indicate; hence we think its name must have been derived from some other circumstance.

The Trumpeter has a "turn-crown" like the Barb; a smaller tuft of feathers sprouts up at the root of the bill, called the "horn," which constitutes its most striking peculiarity, while its legs are very heavily feathered to the end of the toes. They are generally pure white, though some are very regularly mottled with black and white They are very prolific, excellent nurses, and are easily fattened for the table, a consideration not to be overlooked in so large a bird.

No. 2. **Nun and Morehead.**—The Nun is one of the smallest of our pigeons, being scarce above the size of the Tumbler. It has a very neat appearance, and is one of the prettiest of the "toy" pigeons. Its head and turn-crown or tuft, flight-feathers, and tail, should be of the same whole color, and are either black, blue, red or cinnamon, while the remainder of its plumage is pure white. It derives its name from its colored head, which suggests the "veil" or "hood" worn by a class of religionists. The Nun has a small and neatly formed head and bill, and a bright pearl eye. They should not be kept in close confinement. Their appearance on the wing is very pleasing, especially a flock of them, if it contains no other birds.

The Morehead differs only from the Nun in having its wings entirely white.

No. 3. **English Carrier.**—Carrier pigeons have been employed from an early antiquity in bringing home intelligence from some place to which the birds had been previously carried. No pigeon can be taught to carry messages out, but merely to bring them back when taken from home; and even for this purpose they must be systematically trained by commencing when young. At first they are carried only a short distance, and then gradually increasing the distance at each successive flight, they are soon enabled to find their way back from great distances. The greatest authenticated distance from which a Carrier has been known to return, is six hundred miles; this was from St. Sebastian, in Spain, to Vervier. The communication to be carried is written upon fine tissue paper, and neatly rolled around the leg and secured with fine thread, thus causing little resistance to the flight of the bird.

Carriers possess far greater powers of flight and endurance than any other tribe of pigeons. All have large, powerful and rigid wings, strongly attached to the shoulders and breast. They cleave the air with almost incredible velocity; it is stated that they have been known to fly, "at from thirty to one hundred miles per hour."

The question has not been satisfactorily settled *how* the Carrier finds its way home through such long distances. It does not seem to be by instinct, nor by the possession of a large development of an organ that phrenologists call *locality*, but it is the more probable that it is simply a strong attachment to the place of its residence, and the exercise of memory, or the knowledge of the country to be traversed. This conclusion is sustained by the fact that the bird must first be trained, and that it cannot find its way back during the night nor in foggy weather.

Thus far we have spoken of Carriers in general. We shall now give a brief description of the English Carrier, which exceeds all others "in the *perfectness* to which all the *points most admired* have been brought, after long and careful breeding."

The English Carrier is next in size to the Pouter, while for gracefulness and symmetry of form it has no superior.

The head of this bird is long, narrow, and flattened at the crown; eye full, bright, and preferred fire-red, surrounded by a large naked rosette of fungus skin, larger in males than females; bill straight, thick, and very long, almost encircled by the "wattle," so called, which is a very large fungus excrescence, rising high above and across the base of the upper mandible, and is slightly developed on each side of the lower part of the bill; the neck is long, only slightly bent, small near the head, and increasing regularly in size towards the body, giving it a cone shape; the breast is largely developed; back broad across the shoulders and narrowing towards the tail.

These birds are mostly black—a few are dun, and fewer still white; while others, less esteemed, are splashed or mottled. They are very hardy, prolific, and excellent nurses.

No. 4. **Jacobine.**—This is one of the smallest of all the domestic pigeons. It takes its name from a row of inverted feathers that almost surrounds the head, which fanciers have thought to resemble the "cowl or hood" worn by the Jacobine friars. The inverted feathers should continue in a "chain" down each side of the neck to the shoulders of the wings. The more compact the feathers in the chain, and the nearer they approach each other under the throat, the better. This ruffle is the leading characteristic of the bird, and when fully developed makes a very striking and attractive appearance.

The head is small; beak small and short; and a pearl eye. The head, flight-feathers and tail, should always be a clear white, but the remainder of the bird may be any whole color, as black, blue, red, and yellow, or buff; a few are mottled, and others entirely white, but they are not much prized. The blacks and yellows are decidedly the prettiest. Some think them poor breeders, but they have been very prolific with us.

The Jacobine is sometimes called Ruffled Jack, Ruffle, and Ruff. D. S. H.

Red Antwerp Raspberry.

Messrs Editors—The Red Antwerp raspberry has proved a failure in the hands of the best cultivators of interior Kentucky. No winter protection that we have been able to give it, has been found sufficient to ensure a crop. Our winters are not so severe as those of New-York, but the changes of temperature are much more frequent and sudden. We have too, more rain than is common with you. The growth of the cane is exceedingly vigorous, and leaves and flowers are put forth abundantly in spring. The cane appears healthy and strong, until about the time when the fruit should begin to form, when the leaves wither and dry up, and by the middle of July four-fifths of the bearing canes are dead.

Will some of your correspondents, familiar with the cultivation of this plant, furnish through your columns an explanation and a remedy? I should like to have a detailed account of your mode of protecting it in New-York. A Subscriber. . *Lexington, Ky.*

We cannot account for the death of the canes at midsummer. Where this variety fails in the eastern States, it is either injured by winter, and exhibits this injury in spring; or is unproductive from unfavorable soil, the canes growing thriftily through the summer. To protect it from the effects of winter, bend over the cane, first making a small mound of a few inches, across which to bend the foot of the stems so as not to break them, and then cover them with an inch or too of soil. The labor is economized by bending the canes of two stocks towards each other, and covering both at one operation.

We have generally found the Red Antwerp unproductive on light and gravelly soils where the Fastolff and Franconia have done well. The Antwerp appears to need a deep, rich, strong and adhesive loam.

Inquiries and Answers.

Hen Manure.—Having read several articles in your paper on the use of hen manure for corn, I have resolved to try an experiment with it myself the coming year; the result of which I will endeavor to give you at some future time. Now what I want to know is, if the manure can not be mixed with something, to obviate the necessity of covering it in the hill before the corn is dropped, thereby saving labor, for we understand the manure will injure the seed if they come in contact with each other. C. G. W. *Buskirk's Bridge* [The hen manure may be mixed with three or four times its bulk of dried peat, dry loam, charcoal dust, or coal ashes, and applied directly in the hill. Billings' corn planter will drop it with corn, so as to leave a small portion of earth between the seed and the manure, provided the latter has been allowed to become quite dry, so as to be well pulverized before placing it in the hopper of the planter.]

Sheep Ticks.—Will you inform me what will rid a flock of sheep of lice or ticks? Jas. Ralston. [Tobacco water is commonly used. For 100 sheep or lambs use four or five pounds of coarse tobacco or stems, chopped fine, and boiled an hour in two or three pails of water, and then add water in the tub until half a barrel or more of the decoction is made. In dipping the animals, be careful that none of the liquid reaches the eyes and mouth, and it should be well squeezed from the wool after immersion, on a rack or board over the tub, to prevent waste. A few days after shearing, the ticks are mostly confined to the lambs, and if the latter are then dipped, it is generally sufficient. Perhaps some of our correspondents may give a better remedy.]

Ditching Plow.—(J. C. Cook, Columbus, Geo) The price of this plow is $10 at the place of manufacture. It is now made by Paschall Morris of Philadelphia, who can supply all eastern and southern demands. It is no more liable to injury from roots, stones, &c., than the common plow.

Allen's Potato Digger.—I suppose Allen's potato digger was thoroughly tried last fall. As I think of sending for one, I wish to know how much better it is than the corn-plow and spade method. Illinois. [It exceeds in value the corn plow, by throwing the potatoes all or nearly all to the surface, separating them from the earth. It will save at least three-fourths of the labor of digging by hand hoes. We think it a valuable implement.]

Hay Press.—I desire information in regard to best hay press. What patent is now the most approved, and what will be the cost? J. H. L. *Rome, Geo.* [Dederick's "Parallel Lever Hay Press," made in this city by Levi Dederick is the one generally used in this section, and we know of no better any where. Price from $130 to $165.]

Hall's Journal of Health.—Will you please inform me where Dr. Hall's Journal of Health is published, and what are the terms? M. Franklin. *Ballston Center.* [By Dr. W. W. Hall, New-York city—monthly, price $1 a year.]

Horses Rubbing.—Is there any way to prevent horses rubbing their tails? I have been troubled a great deal, in preparing stock for fairs, by their rubbing sometimes nearly all the hair off their tails. J. D.

Blindness in Horses.—A gentleman inquires through your columns, what can be done for his horse, which he fears is getting blind. I will give him a simple remedy, which may be of use to him and others. Take half a pint of rain-water, one gill of good rum, and one table-spoon of fine salt—mix well, and put it into the eye twice or three times a day. A friend of mine had a fine colt that was at pasture some distance from the house, where it was not often seen. It came to the barn one day with another horse, and was observed to act strangely. Upon examination, it was found to be nearly blind, in consequence of *wolf teeth.* The teeth were taken out, and a few applications of this eye-water removed the film, and it has now as bright an eye as any other horse.

A few weeks ago, one of his heifers had her eye hurt or diseased in some way, so that the whole pupil turned perfectly white. The eye-water was applied, and she can now see as well as ever. A. H. Bronson. *Callanan's Corners.*

Analysis of Millet.—Can you furnish your readers with an analysis of the grass and seed of Hungarian or other millet seed, so as to know whether it is a hard crop on land? F. J. Hoffman. *Lewiston.* [We do not find an analysis of the plant, but give the following analysis of the seed from an English work:

Albuminous compounds,	15.00
Starch, with a little gum, sugar, and woody fibre,	65.80
Oily matter,	3.60
Water,	11.20
Inorganic constituents, (Ash,)	4.40
	100.00

Grafting the Grape.—Which is the most successful mode of grafting the grapevine? What time should the operation be performed, and which is the best time to cut the grafts? J. W. L. [The grafts should be cut early, and kept in a cool, moist place. The grafting should be delayed until after the leaves are partly expanded. The grafting may be by the cleft mode, precisely as in grafting fruit trees, at the surface of the ground. Sometimes no wax is applied, and the earth heaped up—but waxing is better.]

Prolapsis Uteri in Cows.—I have a very fine, three year old, that brought her first calf about four weeks ago. She had the misfortune to cast her withers, as our farmers say, which means that the uteru turned inside out, and was extended. It was replaced with difficulty, but she has recovered and looks well now, and her calf is large and very fat. I judge she will give eighteen quarts of milk per day. I wish to inquire the best method of treatment in such a case, if there is any plan to prevent the accident, and if after it has once occured it is likely to be repeated. Any information will be thankfully received. If desired I will tell you what was done. R. R. J. *Peacedale.* [We do not know of any special treatment to prevent this accident—minute directions for treatment at the time are given in Youatt, and more general directions in Dadd's Cattle Doctor.]

Corn Planters.—Do you know of a machine that will plant corn in rows, both ways, say 3½ or 4 feet distant each way, so that the corn can be plowed both ways? If so please name the machine to which you would give the preference for that purpose? In your remarks on Billing's Corn Planter, (Feb. 10,) you do not say that the machine is capable of being made to plant corn in squares with the hills of corn equi-distant every way, and be made to drop any required number of grains. I want a machine that *can be made to drop 2 or 3 grains of corn in each hill, and to drop them 3½ or 4 feet apart, east and west and north and south.* Please name the price of the machine, and where it can be had. W. Todd. [We know of no machine working *by horse power* that can be relied on to plant corn both ways. We have seen machines made for this purpose, but slight inequalities of the ground will derange the straightness of the cross-rows, unless the man who drives is constantly on the alert to re-arrange the distances. Randall & Jones' hand planter will plant in rows both ways, with considerable rapidity, the operator taking two rows at a time. Billings' machine plants only in rows one way—the number of grains may be very nearly graduated by increasing or diminishing the size of the cavities containing the grains]

Painting Houses.—What colors should I paint a new frame house, both inside and out, in order that every thing may harmonize? The different parts are the following: The main body of the house, the windows, frames and blinds, the doors and frames, the cornice, finished with ornamental verge and eaves boards, the veranda posts and ceiling within the veranda, the mantels, and stairs. What pigments should be used? I mean such as are most durable and will not fade. The house stands in a lawn surrounded by a few large and a few medium sized trees. If you will answer the above you will not only confer a favor upon an old subscriber, but may at the same time benefit others of your readers. A SUBSCRIBER. [There are many shades of light brown, which cannot be described by words, that afford agreeable colors for the exterior of houses. Brown letter-envelopes and other tinted paper will frequently afford good specimens of color. In houses of moderate pretensions, we would have the window frames, doors, cornice, &c., all of one color. The blinds would do if green, but a light olive brown would be better. Houses of considerable pretensions may have the window frames and cornice a little darker than the rest. The interior may be either china white, or a shade of brown, lighter, warmer, and more lively than the outside, especially if grained. The *great secret to make any paint durable is first to put on a coat of white lead*—this holds all that comes after—as ochre, amber, the Brandon browns, &c., all of which by proper mixture make good browns.]

TAN-BARK.—I would like to know, (through the columns of the Cultivator) if any, in what manner tan-yard bark may be applied to land or trees to the best advantage, as I am living within a mile of a tannery and can get as much of the bark as I wish for the carting of it. If you or any of your readers can inform me of any way, in which it may be made to pay for the trouble, you will oblige the inquirer. D. D. A. [Tan-bark is of little or no value except for mulching. The best mulch is mellow, constantly cultivated earth, but in its absence tan-bark answers a good purpose, provided the diameter of the circle mulched is twice as great as the height of the tree, the distance to which the roots usually extend. Very old, well rotted tan-bark, will make heavy soil lighter.]

AYRSHIRE CATTLE.—*J. W. O, Oak Knoll, Cal.* For prices, &c., of Ayrshire cattle, address T. H. PATTERSON, Haverstraw, N. Y., or A. M. TREADWELL, 251 Pearl-st., New-York city. The cows of this breed, are generally good milkers.

CURE FOR A CRACKED HOOF.—J. S. P. inquires for a cure for cracked hoof. Let him take a chisel, and with a light blow make a cut across the top of the crack, just in the hair. This in healing, will cause the hoof to grow together; but it will take some time for the crack to grow out, as it is impossible to make the hard part of the hoof grow together. I have a question to ask about a horse Is a surfeited horse generally considered incurable? I understand a celebrated V. S. of Bucks county, Pa., is ready to affirm that it is an incurable disease. I do not find that Youatt considers it so. J. W. LEQUEAR. *Frenchtown, N. Y.*

MIXING OF MELONS, &c.—Will melons, cucumbers, and squashes, planted in the same garden, mix so as to affect injuriously *the flavor* of melons, or does the "mixing" simply affect the *seeds*, so as to render them worthless? C. S. L. [The *seeds* only mix the first season, and the result is shown in the *fruit* the next year.

BACK VOLS. CULTIVATOR.—Have you back volumes of THE CULTIVATOR? If you have, how many vols. back? W. R. *Evanston, Ill.* [We can supply all the vols., (six) of the third series of THE CULTIVATOR—price, well bound in muslin 75 cents per vol., or $1 per vol. sent by mail, post-paid.]

MYER'S SUGAR CANE MILL.—Can you inform me in the correspondent's column of the CULTIVATOR for May, where Myer's Sugar Cane Mill can be obtained, and at what price? Also where Thomas H. Miller lives, who cracks it up so high? Also whose, in *your* opinion, is the best sugar cane mill extant, and whether horizontal or perpendicular? E. S. HOLMES. *Wilson, N. Y.* [We neither know the price, or where Myer's Sugar Cane Mill is manufactured, nor are we able to give the address of T. H. Miller. As we have had no experience in the use of sugar-cane mills, we can give no opinion as to which is the best.]

☞ LUTHER H. TUCKER, Junior Editor of the COUNTRY GENTLEMAN and THE CULTIVATOR, was a passenger on board the steamship Vanderbilt, which left New-York for Southampton and Havre on the 23d inst. His letters, which will be commenced soon after his arrival in Europe, will keep our readers informed as to his travels, until his return in September. Hon. IRA HARRIS, Mrs. HARRIS and two daughters, and Col. H. R. RATHBONE of this city, were passengers in the same ship.

Shares' Harrow.

We have given a full practical trial to *Share's harrow*, received from PEASE & EGGLESTON of this city. It proves to be an admirable implement for its intended purpose. It completely pulverizes the surface of inverted sod, effecting this at least three times as deep as the same is performed by the common harrow. Besides this, it possesses one great advantage over the common harrow as well as over the gang plow, in that it does not tear up the sod or bring up the grass. This advantage results from the peculiar form of each tooth, which at first presses the sod down like a sled-runner—then cuts it in the direction of motion—then throws the earth sideways like the mould-board of a plow. The inventor of this tooth has shown much ingenuity in thus combining in the proper order these three offices.

The form of the harrow is neat and perfect. Its three bars are folded snugly together for conveyance, and opened again for use, and firmly braced, with almost a single motion of the hand.

We tried this harrow side by side with a common, nearly new, and well made double-square or Scotch harrow. The Shares harrow pulverized more efficiently and more than twice as deep, at twice passing, as the square one at four times.

Every man who cultivates a farm of any considerable size, especially if the soil be strong or adhesive, would certainly pay for this harrow in one year by the work it would enable him to perform. Nothing can exceed it in preparing inverted sod for corn or for any other crop. It would effect an admirable preparation for the gang plow, in turning under a coat of manure on the top of inverted sod; and it would prepare fall-plowed ground for sowing oats and barley early in spring, in an efficient manner. It is one of the best inventions of late years for the farmer.

FARM DRAINAGE.—A NEW BOOK
By Hon. H. F. French of New-Hampshire.
American Farmers are just awakening to the vital importance of this subject.
Here is the Book to give them light!
Price $1.00.
☞ Sent by Mail on receipt of Price. ☜
Address A. O. MOORE & CO.,
Agricultural Book Publishers,
May2—w2tm1t 140 Fulton-st., New-York.

LANGSTROTH ON THE BEE—
AN INSTRUCTIVE AND FASCINATING BOOK,
Unequaled by any other Work in any Language!
A New and Perfect System of Bee Culture!
Price $1.25.
☞ Sent by Mail on receipt of Price. ☜
Address A. O. MOORE & CO.,
Agricultural Book Publishers,
May1—w2tm1t 140 Fulton-st., New-York.

Notes for the Month.

☞ We learn that Mr. S. E. Todd, an occasional contributor to our columns, has in preparation a work entitled the "Young Farmer's Manual," detailing the various manipulations of the farm, and including a chapter on Fences, with illustrations of nearly every style of fence, and plain and intelligible instructions to aid the tyro in agriculture in building them in a workmanlike and economical manner. Mr T. requests us to add that those who have illustrations of any kind or style of fence or fence posts, patented or not, will oblige by forwarding descriptions, &c., to him at Lake Ridge, Tompkins Co., N. Y., and if they are deemed worthy of a place in that chapter, with the consent of the proprietors, the cuts and descriptions will be inserted in it.

Buildings for County Society Fair Grounds.—In reply to an inquiry as to the best style of erections for a society proposing to build, we may refer to the description published on page 221 of our last vol., (Co. Gent., Oct. 7, 1858,) of the Amphitheater of the Ontario County Society, near Canandaigua. We do not know its cost, but are inclined to think that better satisfaction is thus given than from any other kind of structure we have ever seen; and, during our visit last fall at the Fair Ground in question, we had ample proof that in case of storms the protection thus afforded to the health and the wearing apparel of visitors, may be of greater pecuniary value in a single year than the first cost of the building itself. We presume our correspondent by addressing the public-spirited Secretary of the Ontario society at Canandaigua, Gideon Granger, Esq., will obtain at once every detail he can desire.

The Next California State Fair.—The citizens of Sacramento City, where the fair of the California State Ag. Society is to be held this fall, and those of the county, seem to be in earnest about the matter. They have already obtained authority from the Legislature to tax the whole people of the county one-quarter of one per cent.; by this means, the sum of $30,000 will be raised for Public Buildings and Fair grounds. At a meeting of the Managers of the Society, held at Sacramento, Feb. 25, it was resolved that in addition to the $5,000 which the State appropriates for the payment of premiums, and which it was decided to pay in all cases in cash, there should also be offered by the Society $7,000 from its own funds, to be paid either in plate, medals, diplomas, books, &c, as should be deemed most advisable. All this looks as though the people of our western coast were likely to start with a better idea of the importance of Agriculture to the community, than has even yet grown up in some of the oldest parts of the Confederacy. There is now enough improved stock, cultivated fruit, good tillage, and public-spirited enterprise in California, to make a most interesting Agricultural Exhibition this fall, and one, the fruits of which will have no inconsiderable bearing upon the future prosperity of the State.

Bees for Oregon.—We understand that Mr. Geo. W. Stephens from California, has just passed through this city, with 50 stocks of Bees, destined for Oregon. They were furnished by Mr. Quinby of St. Johnsville, N. Y. We think he could hardly have made a selection in a better quarter.

More Short-Horns at Albany.—Mr. Wm. Hurst has purchased of Samuel Thorne, Esq., the roan heifer "Minna," got by "Duke of Gloster," (11382,) out of imp. "Minerva 2d.," bred by Mr. Slade, Kemiral House, England. Also the noted cow "Bloom," imported by Col. Lewis G. Morris, and illustrated in his Catalogue for 1856, bred by Mr. Fowle, Northallerton, Eng., and winner of the first prize at the New-York State Show in 1854. Mr. Hurst has moreover purchased of the Rev. Dr. Beman of Troy, the roan cow "Bellflower 2d.," bred by Geo. Vail, Esq., and her young bull "Beman Duke." Bellflower 2d, was got by Mr. Vail's Meteor 104, (11811,) out of Bellflower, bred by the late General Stephen Van Rensselaer.

☞ The call for a convention of Cattle Breeders which we recently published, drew together a number of gentlemen interested in the various breeds, at Hartford last week, who organized under the Presidency of John T. Norton, Esq., Secretary, M. C. Weld. We learn from the *Homestead* that a constitution was formed of an "*Association of Breeders of Thorough-bred Neat Stock*," which received the signatures of 33 breeders—1 each from Vermont and New-York, 11 from Massachusetts, and the remainder from Connecticut. Under this constitution the following officers were elected for one year:

President—John T. Norton, Farmington.

Vice-Presidents—Paoli Lathrop. South Hadley, Mass., (Short-Horns;) Lemuel Hurlbut, Winchester Center, Ct., (Devons;) John Brooks, Jr., Princeton, Mass., (Ayrshires;) Thos. Motley, Jr., Jamaica Plains, Mass., (Alderneys;) Ambrose Bowen, Oak Grove, Medina, N. Y., (Herefords.)

Secretary and Treasurer—Henry A. Dyer, Hartford.

Among the measures taken before adjournment, a "committee on pedigrees" was appointed, and it was resolved to issue circulars asking the co-operation of breeders; to direct the preparation of a scale of points for each breed by the committee on pedigrees; to hold the next annual meeting at Springfield, Mass., next March, and to ask the aid and support of State Ag. Societies in furtherance of the objects of the association.

Draining in Ontario Co.—At its winter meeting the Ontario Co. Ag. Society awarded two premiums of $25 and $15, for the greatest number of rods of tile or stone drains put down during the year 1858. The first was awarded to Mr. Wm. Johnson of Geneva, who put down 604 rods drains, of two inch tile, at a cost of 31¼ cents per rod, and 144 rods of drains of six inch tile, costing 70 cents per rod. These drains were put in nine and a half acres of land. The second, to Mr. Thomas Tufts of Gorham, who put down 500 rods—2000 tile were 1½ inch, the balance of tile were 2 inch. There were some few rods of stone drain. The tile drain cost 28 cents per rod, and the stone drains 37½ cents per rod.

☞ Darlington's American Weeds and Useful Plants," recently published by A. O. Moore & Co., has been widely noticed as a "Second Edition" of the "Agricultural Botany" of the same author. This indeed it is; but some prominence should be also given to the fact that it is not, like many "new editions," merely a new impression from old plates, but that it has been thoroughly revised, enlarged, and put wholly in a new form—an undertaking which as it comprises over 450 compact pages, and nearly 300 illustrations, (all new,) reflects much credit upon the publishers, and aside from the high intrinsic merits of the book, should go far to attract for it a generous patronage from the Agricultural public. [Copies for sale at this office—price, postpaid, $1.50.]

☞ The American Veterinary Journal, by Dr. Dadd, Boston, has, we regret to learn, been discontinued for want of competent support. Dr. D. says: "The only explanation I have to offer is, that in consequence of remissness on the part of subscribers for the past two two years, my pocket-book is the seat of a very severe attack of dyspepsia, which threatens to confine me and my family to a diet of shorts."

"Honey Blade Grass."—A correspondent in Missouri informs us that the seed advertised as the "Hungarian Honey Blade Grass," was purchased by its present proprietors last fall, in St. Louis, at *fifty cents* per bushel—the same seed which they now advertise, put up in bags stamped with the Hungarian coat of arms, at $9 per bushel. Those of our readers who think this only a reasonable profit, will send on their orders at once; but those who wish to make a trial of it, and do not want the *pictured bags*, can get it at most of the seed stores at $3 per bushel.

☞ Under the title of "The Quarterly Journal of Agriculture," the management of the U. S. Ag. Society have determined to publish their proceedings once in 3 months, instead of in an annual volume or a "monthly bulletin" as heretofore. In view of this object, we think the publication might have been less open to criticism, if the title chosen was somewhat less ambitious; as the quarterly journal of the *United States Ag Society* it is an interesting record of what we all want to know, but if comparison is invited with other journals of *Agriculture*, we must judge of it from a very different point of view. Without seeming captious, may we also suggest to the proof reader to consult a lexicon as to the proper spelling of Agricultur*al*ists and Horticultur*al*ists—words repeated in running titles and otherwise on nearly every page, and always with this abnormal number of syllables. The number of the "Journal" for April, now before us, contains 28 pages of the Proceedings at the Society's last Annual Meeting; 11 of miscellaneous matter; then an interesting, although of course concise, resumé of the State Ag. Exhibitions for 1858, and mention of most local and county ones, occupying about 26 pages; and concluding with 15 more, taken up with prospectus, the affairs of the Society, extracts, notes, &c., of considerable variety.

Personal—A British View of American Agriculture.—Hon. Richard Cobden, distinguished in his own country and abroad for his strenuous and successful advocacy of the Corn-Law Repeal, as well as other reforms, and who has been traveling for several months in the United States, was the guest for some days last week of Hon. Bradford R. Wood of this city. Mr. C., as might be expected, has taken a deep interest in our agriculture; for his views as a statesman had not only lead him to a thorough study of this science in all its bearings, in Great Britain, but his individual tastes have likewise induced him to undertake the actual practice of farming himself. He expressed his surprise both at the natural fertility of our soils and at the negligence with which we too often regard its preservation. He appears to have been especially struck with the vast expanse of productive territory which Illinois contains, and spoke in astonishment of having travelled by rail *in a single State, seven hundred miles, of which probably six hundred and fifty* were fitted perfectly for plow lands. The resulting problem, he remarked, was one of difficult solution to him, and vital interest to ourselves—how is it that our farms generally average the scant yield of 15 bushels of wheat per acre, while our older States are already complaining of exhaustion, and, on the contrary, England brings comparatively in fertile districts up to a yield of 40 bushels per acre, and nowhere admits the idea of anything approximating to exhaustion? We are under obligations to Mr. C. for some information as to agriculture in his own land, and for letters which will enable us we hope, during the present season, to see, and perhaps imperfectly explain some of the causes of the vast difference to which he so earnestly alluded.

☞ N. Longworth, the veteran of Cincinnati, was recently chosen President of the "Pioneer Association" of that city, and we are indebted to him for copies of the Address delivered on the occasion. It is full of incidents, and illustrates not less the rapid growth of the place, and the good fortune that has attended many events in the author's history, not at the time considered to promise it,—than it does the store of anecdote gathered in so long a life, especially when it has witnessed all the stages of progress from the log cabin of a lonely settler, to the crowded streets where citizens are numbered by tens and hundreds of thousands.

Serious Loss.—We have to record a serious loss to private enterprise and to the State of Virginia, in noticing the misfortunes that befel a vessel containing a fine Cleveland bay stallion, purchased at an expense of upwards of $3,000 by Dr. John R. Woods of Albemarlo. The ship put into St. Thomas in distress, where she was compelled to remain for repairs. The cause of the death of the horse, as well as the fate of a magnificent buck, also the property of Dr. W., was not yet known at the date (Ap. 10,) of a private letter received from him, to which we are indebted for these facts, but the vessel was expected soon at Baltimore, when the events of the voyage would be at once ascertained.

☞ We noticed last week the purchase by John P. Welsh, Esq., of Oregon, of a Short-Horn bull from Mr. Thorne, for exportation to that State. We now learn that Mr. W. took in the same steamer with the above, the thorough-bred mare, "Mary Chilton," by imported Glencoe; the South-Down buck No. 220, 3 yrs. old, bred by Jonas Webb, and imported by Mr. Thomas Betts; a Hampshire buck. 2 yrs. old, bred by Lord Portsmouth; two South-Down lambs, bred by R. A. Alexander, Esq., of Woodburn, Woodford Co., Ky; three New-Oxfordshire lambs, bred by John T. Andrew, West Cornwall, Conn., and one shepherd bitch.

The One Eye Potato System. — *T E J.*, East Windsor Hill, Ct., reports in the *Homestead* that having read in his Cultivator last year, the articles of our correspondent Gerald Howatt on Potato Culture; he followed Mr. H.'s directions substantially "till he came to the harrowing," of which *T. E J* was a little afraid. He therefore substituted for that implement, what "might be called a bush harrow," made by inserting the butts of white birch saplings, untrimmed, into a joist four or five feet in length, and then nailing strongly to this joist, some four inches apart, narrow strips of boards sharpened at one end like a flat picket, and projecting down towards the ground four inches. "This answered the purpose admirably"—a weight being put on to it, the first time using it, in front nearly over the teeth, "which caused it to level the ground nicely," and the second time it was used, over the middle of the brush, nearly lifting the teeth out of the ground, sweeping off the weeds, while the potatoes and their sprouts, then just beginning to appear, were "unmolested." This was on land free from stones; the crop was a good one, and as the sprouts came up on clean land, the labor of subsequent cultivation was reduced one half, and enough saved by the process to pay the subscription price of several agricultural papers.

Continuance in Good Works.—We are glad to know that the customary appropriation of $1,000, for the continuance of Dr. Fitch's most valuable Entomological investigations, has again passed both branches of the Legislature of this State.

Fine Lettuce.—Mr. Roessle of the Delavan House, who provides for the tables of that extensive establishment from his own vegetable-farm, will accept our thanks for a supply of the finest lettuce we have yet seen, the leaves measuring over twelve inches in length, which is doing tolerably well for this latitude about the 1st of April.

Buckeye Potatoes.—For samples of this variety, which may be seen at this office, we are indebted to Mr. E. Wanzer of Greenbush. They are somewhat above the average size, although varying considerably both in this respect and in shape.

Windham Co. (Ct.) Ag. Society.—The next exhibition of this Society is to be held at Brooklyn, Sept. 21, 22. Its officers are:

President—Apollo Richmond of Brooklyn.
Vice-Presidents—Albert Day of Brooklyn, John Paine of Woodstock, William Bennett, Jr , of Hampton.
Recording Secretary—Jas. B. Whitcomb of Brooklyn.
Corresponding Secretary—Chas. Osgood of Abington.
Treasurer—Edwin Newbury of Brooklyn.

Clover on Barley.—In England, according to the editor of the *Genesee Farmer*, nearly all the clover is sown with barley. The land is made as mellow as possible, and the clover seed is generally sown after the barley has been harrowed in and the work completed, except rolling, which is done after the barley is up. "Barley," it is added, "is undoubtedly the best spring crop for this purpose."

SHRINKAGE OF CORN IN DRYING.—A member of an Eastern Town Club, took 100 lbs. of ears of King Philip corn as husked the middle of October, when the stalks were quite dead and the ears dry and hard, and laid it in a box to dry until the 15th of Jan. It then weighed 84¼ lbs., and the shelled corn, 70½ lbs., and measured 1 bush. 4¾ qts. This corn was then laid on a sheet to dry in a warm chamber, until Feb. 4th, when it was winnowed, weighed and measured, with the following result: weight, 66 lbs.; measure, one bushel and two quarts, showing a shrinkage of 34 per cent. from the ear at husking time, to dry shelled corn. We condense from the *N. E Farmer*.

SUCKERING CORN—GROWING PUMPKINS.—At a recent meeting of the Skaneateles Farmer's Club, some remarks were made on this subject, and reported in the *Democrat*. Mr. GAYLORD, on a trial of the experiment, found the unsuckered corn the best. H. ELLERY had tried it, and thought it did not pay. C. MOSES had been successful in growing good corn and pumpkins together. He was particular in selecting seed from pumpkins which had large crowns.

OSIER WILLOW—THE RIGHT KIND.—In regard to planting osiers for market, G. W. THOMAS of Fulton, N. Y., says in the *Rural New Yorker*, that he planted three acres three years ago, two to the *Salix purpurea*; (or *S. viminalis* of some writers,) and one to the *Salix triandra*. The first is "every time, and under all conditions, *good*." The latter is worthless, or worse, "being short, scraggy, and every year a little more so."

CLEARING OFF ROCKS.—A writer in the *N. E. Farmer*, after blasting, breaking and burying rocks until his patience was exhausted, says he tried fire and water. He collected a good quanity of brush, leaves, and any combustible rubbish, and kept up a brisk fire for hour, about a rock weighing three or four tons. He then dashed on a few buckets of cold water and the rock fell in fragments.

CORN FODDER FOR WINTERING HORSES.—It is stated in the *Genesee Farmer*, that JOS. WRIGHT of Seneca Co., has kept fifty horses the past winter in fine order, on corn-stalks, very finely cut by steam power, and a little Indian meal sprinkled over them, after moistening the mass. He thinks this a saving of one-half over hay and oats.

PROFITABLE SHEEP.—I will give you a statement of a little flock of sheep that I have raised in two years. I bought three ewes, two years ago this spring—two of them had four ewe lambs; and last year six of them had eight ewe lambs, making in all fifteen ewes; they have never had a buck lamb. I consider it a pretty good increase. I paid $14 for the first purchase, and the wool has about paid for keep, and I have just sold the flock for $75. J. SHATTUCK.

UNRIPE CORN FOR SEED.—A writer in the *Prairie Farmer*, reporting the transactions of the Farmers' Club, states "that corn gathered before fully ripened, and hung up to dry in the house, germinated sooner, and was more forward through the season, than if left to ripen in the field." Have any of our readers made trials throwing light on this point?

DELAWARE CO. AG. SOCIETY.

President—S F. MILLER, Franklin.

Vice Presidents—Wm. D. Bowie, Andes; Porter Frisbee, Meredith; J. B. Yendes, Delhi; Lyman Lawson, Kortright; Elijah Roe, Sidney; Eli B. Hopkins, Franklin; Ezra Osterhout, Davenport; Daniel Andrews, Stamford; T. S. Hoyt, Walton, and C. Gibbs, Harpersfield.

Rec. Secretary—C B. Wade, Walton.

Cor. Secretary—Z. H. Sloat, Meredith.

Treasurer—Hiram Olmstead, Walton.

The next Annual Fair of this Society will be held in the village of Bloomville, on Wednesday and Thursday, the 14th and 15th of September, 1859. X.

PUMPKINS AMONG CORN.—Should corn and pumpkins be planted together? We do not remember to have seen any very accurate test of this question. One trial which is stated to have been made, resulted in forty loads of pumpkins on one-half the field, against two bushels increase in the corn of the other half, planted without them. If neither crop grew very stout, perhaps such would be the usual result.

DRAINING PLOW.—The Associate Editor is unable to answer the numerous private letters of inquiry in relation to this plow. It is believed the advertisement, and the editorial account of the experiments with it published last autumn, give all the information necessary, and to these inquirers are referred. Much more expense has been incurred in experimenting, than is likely to be reimbursed by the sale of plows, consequently the advertised terms cannot be varied.

REMEDY FOR THE ONION MAGGOT.—Much loss has been experienced among onion growers from the destruction of the young plants by the maggot. Mr. Emerson of Hollis, states in the *N. E Farmer*, that good guano applied on the rows by sprinkling on with the hand, so as to nearly cover the little onions, is an effectual remedy. "The guano must be good, and put on with a liberal hand"—his onions, he adds, do finely under the treatment.

STEUBEN CO. FAIR.—Our county fair is appointed for the 28th, 29th and 30th Sept. ROBT. M. LYON, *Sec'y*.

Grafting Knives.

MESSRS. EDITORS—The accompanying drawings of grafting knives I wish you to give in your journal if you see fit to do so. There is a great gain in using a tool best adapted to its work, and I think those unacquainted with fig. 2, will, after an explanation of its advantages, desire to procure it. Fig. 1 is taken from April no. of the American Agriculturist. Fig. 2 is the knife used by most western grafters. I have handled both. The wedge point, *a*, should be made of steel, well tempered and not of iron, (as was the one I purchased, and which gave me much trouble by bending,) for the point, in pressing open the slit just before placing the graft, receives a considerable strain

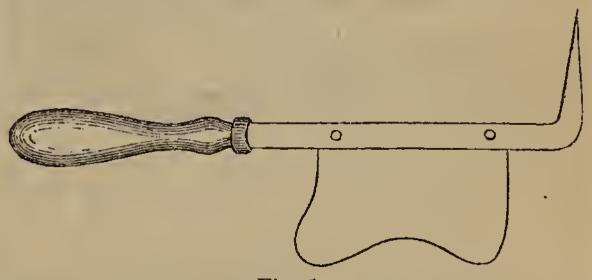


Fig. 1.

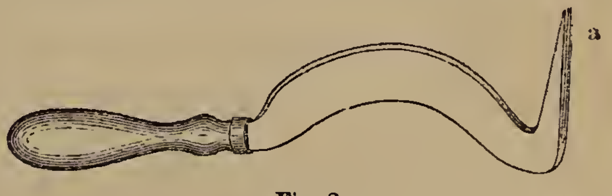


Fig. 2.

No. 1 would be as good as no. 2, if you could always be in a favorable position to handle it; but limbs are sometimes very difficult to get at. In such cases, no 2, from its form, is preferable, and a man can in a day accomplish more with it, and with greater ease, for in driving in the wedge point *a*, there is no projecting knife blade in the way of your mallet, (which should be a round piece of hard wood,) to interfere with the direction of the blow, or worse still, in some awkward positions, there is a risk of hitting your hand against the blade. I mention this feelingly. No 2 is frequently made too thick in the blade, but when properly made is a very satisfactory tool to work with, much more so than the other, according to my experience.

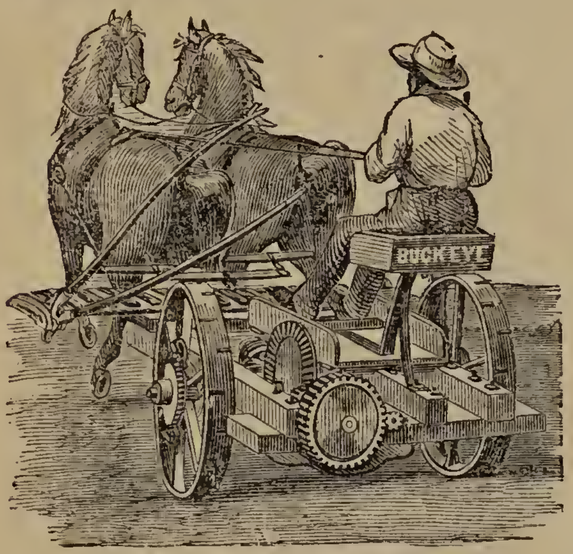
E. P.

HAY AND GRAIN PROTECTORS.

The subscribers have for four years, by extensive correspondence, by practical observation, and by many experiments, endeavored to obtain information that would be a guide to the manufacture of the best *Hay and Grain Covers*, and we now offer the results of these investigations to the public. *We know* that our Protectors are the best ever yet offered to the farmers. As to the utility of the covers, we have the testimony of intelligent farmers in every part of our country.

Orders for samples or covers should be forwarded at once.

CHASES & FAY,
No. 14 City Wharf, Boston, Mass.
May5—weow2twStm3t



BUCKEYE MOWER,
WITH FOLDING BAR.

Aultman & Miller's Patent.

The subscriber takes pleasure in calling the attention of Farmers to the "BUCKEYE," the most complete and successful Mower ever introduced; combining in the simplest form all the qualities necessary to a perfect Mower. Its frame is supported on *two driving wheels*, either of which is independent of the other. The CUTTER BAR is attached to the frame by a DOUBLE HINGE JOINT, which allows either end, or the whole, to rise or fall, to conform to inequalities of the land. By means of a *lever*, the Cutters can be raised to pass obstructions or over cut grass—in mowing can turn either to right or left—always throws itself out of gear in backing, and backs with the ease of a cart; is light draft, free from side draft; has no weight on the horse's neck; is safe for the driver; almost noiseless in its operation; works well on any land—side-hills or salt meadows; and in any grass, whether lodged or standing, at a slow walk of either horses or oxen.

When not in use, the Cutters can be instantly folded over the front of the frame, and the Mower then driven any distance on the road. This feature belongs exclusively to the Buckeye Mower.

Since its first public exhibition, at the Great National Trial of Harvesting Machines at Syracuse, N Y., July, 1857, at which it received the HIGHEST AWARD, THE FIRST PREMIUM GRAND GOLD MEDAL AND DIPLOMA, AS THE BEST MOWER, IN COMPETITION WITH *Manny's*, *Ketchum's*, *Hallenbeck's Allen's*, *Burrall's*, *Kirby's*, *Heath's*, and several others its principles have been fully tested by more than One Thousand Farmers, and without an exception, has received their unanimous approval. During the past season, numerous *First Premiums* were awarded to the "BUCKEYE," including the *New-York and Connecticut State Agricultural Societies.*

THE BUCKEYE HAS NO EQUAL—IT IS THE BEST MOWING MACHINE IN USE.

It is warranted to cut and spread from 10 to 15 acres of grass per day, with a span of horses and a driver, as well as is done by the best mowers with a scythe.

The demand the past season was far beyond our ability to supply, and we trust orders will be forwarded early, to prevent disappointment. ☞ Circulars, with a full description, forwarded on application.

JOHN P. ADRIANCE,
Manufacturer and Proprietor,
No. 165 Greenwich-st., New-York.
EMERY BROS., Agents, Nos. 62 & 64 State-st., Albany, N. Y.
May1—w&mtf

SEED POTATOES—(at reduced prices.)

Early Carpenter,	$2.00 per bushel.
Early Wendell,	1 50 "
Early June,	1.00 "
Davis Seedling,	1.00 "
Dovers,	1.00 "
Prince Albert,	1.00 "

Also the following celebrated English and French varieties:

Early Manly,	$2.00 per bushel.
Truffle d'Aout, (early)	3.00 "
Marjolin, (early)	3.00 "
Chave or Shaw, fine for general crop,	3.00 "
Lapstone Kidney,	3.00 "
York Regents,	3.00 "
Forty-fold,	3.00 "
Vittelotte,	1.50 "

Purchasers ordering one bushel of either of the above varieties will receive with each bushel liberal samples of three of the new French varieties advertised by us in a late No. of the Country Gentleman, *without* extra charge. Cash orders will be promptly filled. Address

B. K. BLISS,
Springfield, Mass.
Ap.28—w3t m1t

Hardy Native Grapes in Pots.

WM. R. PRINCE & CO., FLUSHING,

N. Y., have now growing in pots, *above* 250 *Native varieties of Grapes*, among which are 500 Delaware, Rebecca, Clara, Logan, White Transparent Catawba, Summer Catawba, (ripening one month before the old Catawba,) and 25.000 of other estimable varieties, and those hitherto high priced, at greatly reduced rates. A Priced List will be sent to applicants who enclose stamps.

A General Descriptive Catalogue of Grapes will soon be published, and a new edition of Prince's Treatise on the Vine. May1—w&m1t

AGRICULTURAL IMPLEMENTS
AT MANUFACTURER'S PRICES,

Consisting of Endless Chain Horse Powers and Threshers, Excelsior Fan Mills, Corn Shellers, Harrows, Straw and Hay Cutters, Cider Mills and Presses, Churns, Cultivators, Iron and Wood Beam Plows, &c., &c. Send for a Circular giving prices. For sale by A. LONGETT,
Mar 1—m3t | mar 24—w6t No. 34 Cliff-st., New-York

THE LODI MANUFACTURING CO.
Poudrette! Poudrette!!

Is offered for sale by the subscribers, wholesale and retail, in lots to suit purchasers. This article has been now in use for over 17 years, and is the most popular manure for corn and early vegetables, in market.

It is quick and powerful, and can be put in direct contact with the seed without injury. Price $1.50 per barrel, delivered on board of vessel, for any quantity over 6 barrels. $2.06 for a single barrel.

CERTIFICATES.

The undersigned have used the Poudrette of the Lodi Manufacturing Co., for the number of years, and upon the crops set opposite to their names, and can recommend it as a cheap, and most excellent fertilizer.

Charles Smith, Bloomfield,	N. J.,	10 years,	corn.	
Cyrus Canfield, Caldwell,	"	10 "	"	
John Squires, Livingston,	"	10 do.	and garden	truck.
A. J. Jacobus, "	"	17 do.	"	"
H. W. Harrison, Caldwell,	"	10 do.	"	"
J. Simpson, Franklin,	"	8 do.	"	"
Hiram Farnham, Livingston,	"	15 do.	"	"
J. A. Harrison, Orango,	"	10 do.	"	"
B. F. Lum, Chatham,	"	15 do.	"	"

A pamphlet containing certificates of practical farmers in all parts of the United States, with every information and direction for use, will be mailed to any one sending the address. GRIFFING BROTHER & CO.,
General Agents for the Company,
NORTH RIVER AG. WAREHOUSE, 60 Cortlandt-st, N.York.

TO PLANTERS AND FARMERS.
CORIA.

This fertilizer is composed of dead animals, leather scraps, old boots and shoes, (gathered in cities,) dissolved by a new and ingenious process, into a liquid of the consistency of molasses; to this is added night-soil, blood, and ground bones. The whole is then dried and ground.

It is offered for sale on the strength of the well-known fertilizing qualities entering into its composition. Circulars, with directions for use and analysis, will be forwarded on application to the subscribers—agents for the Lodi Manufacturing Co. GRIFFING BROTHER & CO.,
North River Agricultural Warehouse,
March 1—m3t No. 60 Cortlandt-st., New-York.

SUMMER FLOWERING BULBS

FOR SPRING PLANTING.—Amaryllis Formosissima, crimson, $1 50 per dozen—15 cents each.

Gladiolus Psittacinnus, orange,	75 cts. per doz.	—10c	each.
" Florlbundus, w'ite and pink,	$1.50 "	15	"
" Gandavensis, scar't & or'nge,	75 "	10	"
Trigridia Pavonia, red, ...	1.00 "	10	"
" Conchiflora, yellow,......	1.50 "	15	"
Tuberoses, (Double,) Italian, white,	75 "	10	"
Madeira Vine, white.	1 00 "	10	"
Choicest Double Dahlias,(by name,)	3.00 "	25	"

For sale by WM. THORBURN, Seedsman,
Ap7—w3tm1t 492 Broadway, Albany.

COMMERCIAL AGENTS WANTED.

Able and honest men from New-England or New-York. A. W. HARRISON, Philadelphia, Pa. feb.10-6*

GENUINE HUBBARD SQUASH SEED.—

The subscriber having made arrangements with the original introducer (Mr. J. J. H. Gregory,) of this, the very best of squashes, is now prepared to furnish genuine seed to all who desire. The seed is put up in liberal packages, at 25 cents each ; by mail 28 cents. The trade supplied at a discount of one-third. One dozen packages will be forwarded to one address at the same rate, or by mail for $2.42. WILLIAM THORBURN,
Mar31—w3tm1t 492 Broadway, Albany, N. Y.

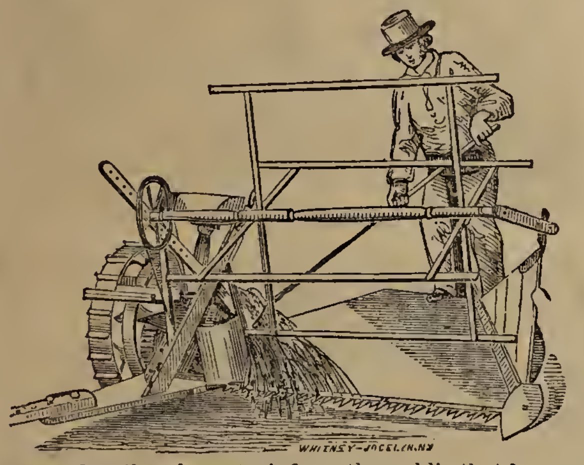
EARLY PARIS CAULIFLOWER.

Latest importation. Premium Flat Dutch and true Red Dutch Cabbage—each 12½ cents per package, or all three for 25 cts., by mail. Address "RURAL EMPIRE CLUB." Macedon Center, Wayne Co., N. Y.
Mar10—w&mtf.

MANNY'S COMBINED REAPER AND MOWER,

WITH WOOD'S IMPROVEMENT,

For the Harvest of 1859.



The subscriber begs to inform the public that he continues to manufacture this popular machine, and pledges himself to produce an implement that will fully sustain its former reputation, as the best combined machine yet introduced, and inferior to none, either as a Reaper or Mower.

It has had a steady and increasing popularity from the first achieving a complete success in the first important trial at Geneva in 1852. It carried off the highest honors at the great National Field Trial at Syracuse in 1857 ; and amidst all the competition and trials of 1858, came out with more and better established points of excellence than ever before.

The general principles peculiar to this machine, and upon which it is constructed, have proved so successful that there has been no attempt to change them.

The main effort during the last year has been to improve its mechanical construction, to make it stronger and more durable, and sustain its reputation as the leading and most acceptable machine to the largest class of farmers in the country.

Warranted capable of cutting from 10 to 15 acres of grass or grain per day, in a workmanlike manner.

Price of Machine as heretofore, varies according to width of cut, and its adaptation in size and strength to different sections of the country, from $125 to $150, delivered here on the cars. WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

FOR SALE CHEAP.—DURHAM

BULL LOCO FOCO, (1778)—calved March 1853—color red with some white. He is in prime condition, and every way a desirable animal. Price $150—cash.
R. HALE,
Ap14—w3tm3t Aurora, Cayuga Co., N. Y.

FIELD AND GARDEN SEEDS

from reliable growers.

Agricultural and Horticultural Implements of the most approved patterns.
GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., New-York City

NO. 1 PERUVIAN GUANO,

"Hoyt's" Superphosphate of Lime,
Bone Dust, Plaster,
Poudrette, Tafeu, &c.

The above Fertilizers *warranted* pure, and sold at the lowest market price.
GRIFFING BROTHER & CO.,
Feb. 10—w&m3ms 60 Cortlandt-st., N. Y. City.

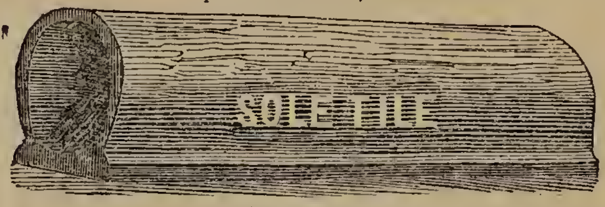
N. Y. STATE TILE WORKS,

On the Western Plank Road, near the Orphan Asylum, Albany, N. Y.

ALDERSON & JACKSON, Proprietors.

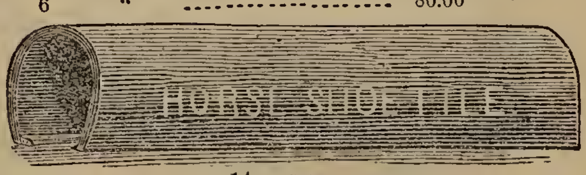
The subscribers are determined to make the best Drain Tile in the United States. Yes, we are determined to make our Tile of pure Yellow Clay, clear of sand or blue clay, and neither gas tar nor coal dust mixed through it, as all those cause the Tile to perish with frost, and they are not so strong. We are determined to make the best Tile ever offered in Albany, and at the following prices :

ROUND TILE—1¼ inches round, ...	$9 per 1000	
2¼ inches round, ...	12	"



CUT 14 INCHES LONG.

2	inches rise,....................	$10.50 per 1000	
3	"	16.00	"
4	"	35.00	"
5	"	55 00	"
6	"	80.00	"



CUT 14 INCHES LONG.

2½	inches rise, ...	$10.50 per 1000	
3½	"	15.00	"
4½	"	18.00	"
5½	"	35.00	"
6½	"	55 00	"
7½	"	75.00	"

Remember our Tile are near 14 inches long. Please give us a call before purchasing elsewhere. Cartage free to docks and railroads.

☞ Emery Bros., Agents, 62 & 64 State-st., Albany.
Ap7—weow6m2t*.

OPPOSITION FOR ALBANY.

MERCHANTS' LINE OF STEAMBOATS,

DAILY, at 6 o'clock, P. M., from the foot of Robinson-street, in connection with the New-York Central Railroad.

The Steamer KNICKERBOCKER, Capt. W. B. Nelson Mondays, Wednesdays, and Fridays.

The Steamer HERO, Capt. J. W. Hancox, Tuesdays, Thursdays, and Sundays.

Tickets can be had at the office on the wharf. for all the stations on the New-York Central Railroad, and the principal cities in the Western States and Canada.

Baggage checked to all points, free of charge.

Freight carried at reduced rates and forwarded promptly. ELI HUNT, Agent.
New-York, March 10, 1859—w&m9ms

D. L. HALSEY, DEALER IN *CRANBERRY PLANTS,*
Victory, Cayuga County, N. Y.

☞ PRICE—$1 per Hundred—$6 per Thousand.
Feb. 24—weow6tm2t

GARDEN, FIELD, FLOWER, *AND FRUIT SEEDS.*

The subscriber offers a full assortment of the above Seeds, of the growth of 1858, of the very best qualities, and in addition to all the Standard varieties, will be found many novelties. Orders by mail attended to immediately. Wholesale and Retail.

A CATALOGUE, containing full lists of Seeds and Prices, furnished on application.

SEED POTATOES of all choice kinds.

SPRING WHEAT, SPRING RYE, SPRING BARLEY.

OATS of superior quality.

GRASS AND CLOVER SEEDS.—Honeyblade or Hungarian, Green, fine mixed Lawn, Blue, Orchard, Timothy, Red Top, &c.; Red Clover, White Dutch, Luzerne, &c.

PEABODY'S STRAWBERRY PLANTS—$3 per 100—$2 for 50. Also *Wilson's*, *Hovey's*, and all other popular varieties.

Lawton Blackberry Plants.

Asparagus and Rhubarb Roots, &c., &c., &c.

R. L. ALLEN,
189 Water-st., New-York.

FARM AND GARDEN IMPLEMENTS of every description, and of the best and latest improvements.

Also *Peruvian Guano, Dried Blood and Wool, Bone Dust, Superphosphate of Lime*, and all other improved FERTILIZERS in large and small quantities.
Mar3—weow5tm2t

FRUIT CARRIER, OR PATENT *TRANSPORTATION PROTECTOR.*

(See Co. Gent., May 21, 1857.)

The price of a Protector containing 32 square one-quart boxes, or 32 of the usual round boxes, is $2.87, deliverable at Winchendon, Mass., where Mr. Wm. Murdoch will furnish extra small boxes at $4.50 per gross for round, or $4.76 per gross for the square ones. For a Protector containing four shallow peck boxes, for peaches, plums, pears, &c., the price is $2.10. Orders, addressed to HENRY B. OSGOOD, Whitinsville, Mass., are solicited. ap14w4m2t

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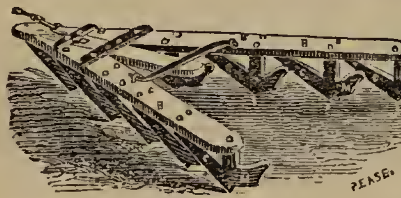
SHARE'S COULTER HARROW, **PULVERIZER AND GRAIN-COVERER.**



Price $15--Weight 185 Pounds.

PORT BYRON, N. Y., 11th April, 1859.

MESSRS. PEASE & EGGLESTON—*Gentlemen*—Last Saturday at my brother's, (J. J. Thomas,) I saw one of your *Share's Harrows*. He attached a team of horses, and tested it in my presence by the side of an ordinary double harrow, (of about 40 teeth,) on sod ground. Once passing of the Share's Harrow *lengthwise*, produced a *surface effect* equal to two (or *nearer to three*,) passings lengthwise of the ordinary harrow; but the *penetration and pulverization of the Share's Harrow, was at least twice the depth, and the tilth far more preferable*, leaving the soil *very much more porous*—about as much difference as between a new *hair* mattrass and an old *straw* bed.

I *think*, after fairly testing one for several days, that I shall be able to confirm my present opinion, that the Share's Harrow, in passing *once* over ground, *both ways*, will produce a better effect than the ordinary square-tooth harrow and best patterns of straight draft harrows, will do in passing *twice*, or perhaps *three* times *each way*, over the ground.

Perhaps the effect on the crop will be even greater in proportion than on the soil—the culture being so much superior.

You will please send me one of your *largest size*—also two extra teeth, as I wish to try the experiment of *lengthening each side*. PENN HOWLAND.

☞ These celebrated machines are manufactured by ap21w4m1t PEASE & EGGLESTON, Albany, N. Y.

CHOICE BREEDING STOCK.—My herd of Short-Horn Durhams is larger than I desire to have it the coming summer, therefore a few young Bulls, Cows, Heifers, and Calves, of good quality, and desirable pedigree, can be bought at reasonable prices.

Residence one and a half miles from Camillus Railroad Station. P. O. Camillus, Onondaga Co., N. Y.
April 21—w3tm1t. E. MARKS.

NANSEMOND SWEET POTATO PLANTS. From 1st of May onward—1,000, $2—6,000, $10—10,000, $15. Our experience enables us to pack so as to carry safely by express throughout the north. Our plants have produced good crops in the north—even as far as 44°—in years past. Circular sent on receipt of stamp.

O. S. MURRAY & SON,
Ap14—w6tm1t Twenty Miles Stand, Warren Co., O.

EXCELSIOR POTATOES, $3 per bbl.
Prince Albert Potatoes, $4 per barrel.
Duke of Cumberland Potatoes, $3 per barrel.
Peach Blow Potatoes, $3 per barrel.

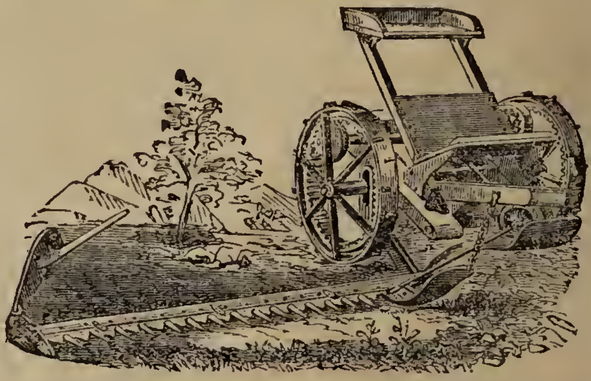
☞ All for seed.

Also a new supply of fine imported GARDEN SEEDS of all kinds, for sale by

PEASE & EGGLESTON,
Dealers in all kinds of Implements, Seeds, &c.,
84 State-st., Albany, N. Y.

☞ Send for a Circular. Mar31—w4tm1t

WOOD'S MOWER.—
Patented February 22d. 1859.



During the six years I have been engaged in the manufacture of the Manny Combined Reaper and Mower, I have given much thought and attention to the construction of what I foresaw would be a great want of the Farmers—a lighter and cheaper machine expressly for mowing, than had yet been made.

And now, after the most thorough and repeated experiments and tests in every variety of field, and in all kinds and in every condition of grass, I am prepared with entire confidence to offer to the farmers and dealers of the United States, the great *desideratum* in this department of Agricultural labor-saving machines—a Mower, superior in its capacity for good work to any hitherto introduced, of easy draft, light, cheap, and durable.

This machine I now offer as my latest invention, to meet a special want of farmers, and to place within the reach of all, a Mower that for practical working, cheapness and simplicity, will be without a rival.

I build Two-Horse and One-Horse Mowers. The Two-Horse Mower weighs 425 lbs., and cuts a swath four feet wide (or more if specially ordered.) The One-Horse Mower weighs 30 lbs. less, (395 lbs.,) and cuts a swath three and a-half feet wide.

For a more full description of the Mower, reference is made to my Pamphlets, which will be furnished on application. With each machine will be furnished two extra guards, two extra sections, one wrench and oil-can.

Warranted capable of cutting ten acres of grass per day in a workmanlike manner.

Price of Two-Horse Mower,	$80
" One-Horse Mower,	70

Delivered here on the cars.

I continue as heretofore, and with greater success than at any previous time, the manufacture and sale of "Manny's Patent Combined Reaper and Mower with Wood's Improvement." WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

PEASE & EGGLESTON 84 State-St., Albany, Agents for Albany County and vicinity.

STEEL PLOWS, MANUFACTURED BY
SAYRE & REMINGTON,
Utica, N. Y.

We would call the attention of Farmers and Dealers in Agricultural Implements, to the STEEL PLOWS we are now manufacturing—as the Steel Plow is destined to supersede the Cast Plow in most localities.

Our Mohawk Valley Clipper Steel was awarded the first premium at the United States National Exhibition at Richmond, Va., in 1858, as being the best Steel Plow on exhibition for general farming purposes

For sale by EMERY BROTHERS, Albany; and MAYHER & McNALLY, No. 197 Water-st., New-York.

For further particulars, send for Catalogue, which we furnish gratis. SAYRE & REMINGTON,
Manufacturers of Sayre & Klinck's Patent Cultivator Teeth, Sayre's (not *Shares'*) Patent Horse Hoe and Double Adjustable Mold-Board Plow Combined, and Steel Plows. Ap14—w&m1t

☞ All kinds *Swaged* work done to order.

PURE PRINCE ALBERT POTATOES, at $4 per barrel.

EXCELSIOR POTATOES, the best early variety, at $3.50 per barrel. Can be obtained by addressing
GRIFFING BROTHER & CO.
Mar24—w4tm2t 60 Cortlandt-st., New-York City.

SUPERPHOSPHATE OF LIME.
BONE DUST. Warrranted pure.
For sale by A LONGETT,
Mar 1—m3t | mar 24—w10t 34 Cliff st , New-York.

PERUVIAN GUANO.—

No. 1 Peruvian Guano, Government Brand and Weight, direct from the Peruvian Agents, at the lowest market price, in quantities to suit purchasers. Send for a Circular. A. LONGETT,
Mar 1—w&m3ms 34 Cliff-st., New-York.

NEW AND CHEAP FERTILIZER.—
CASTOR PUMMACE.

A valuable *organic* (vegetable) manure, analyzed by Prof Samuel W. Johnson of Yale College, and commended by him. It is PUMMACE left after pressing the oil from the Castor Seed, and in India and England bears a high value as a fertilizer. It will be sold at $12 to $16 per ton, according to quantity—at which rate it is the cheapest fertilizer in the market. The analysis and remarks of Prof. Johnson will be sent to any address on application; samples of the article may also be obtained if required.

No charge for packages, and in lots of Ten Tons, delivered free of cartage in this city. Manufactured and sold by H. J. BAKER & BRO.,
Mar24—w8tm3t 142 Water-st., New-York.

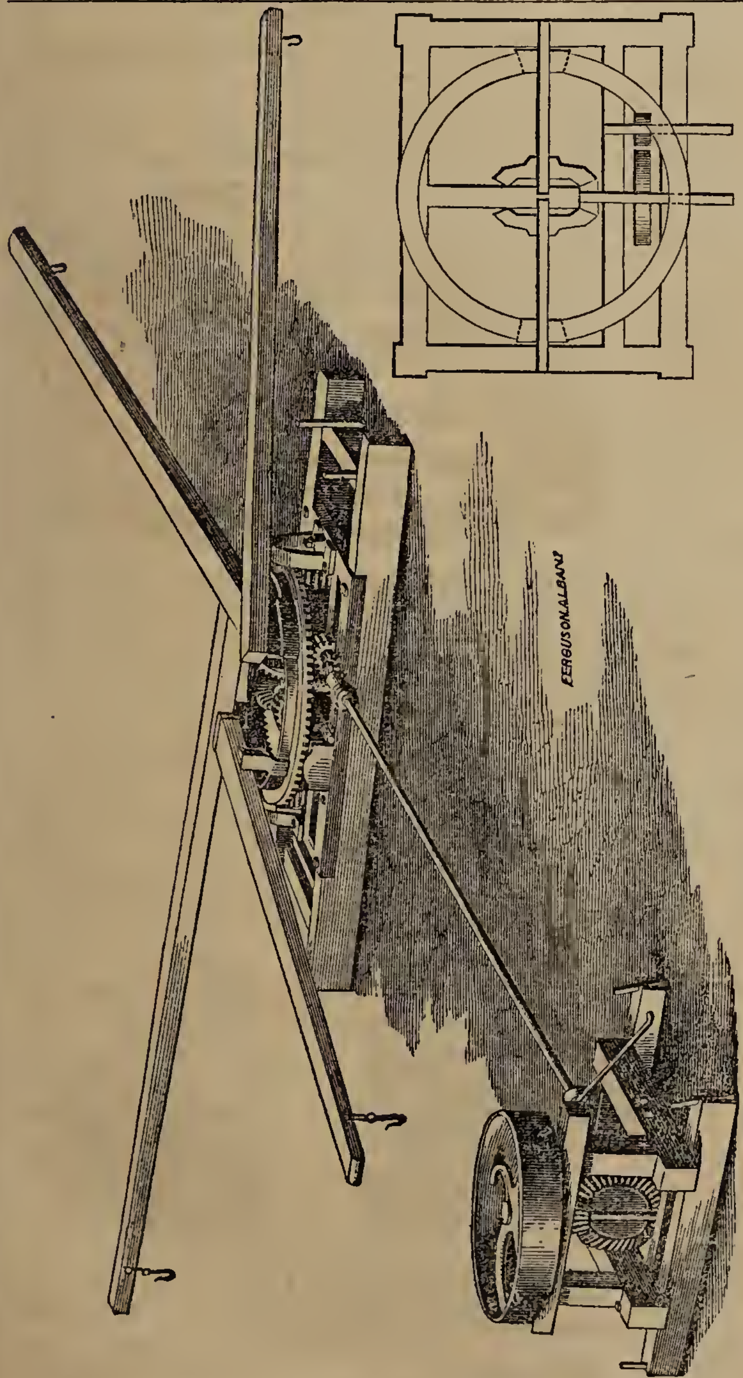


Fig. 2.

Fig. 1.

IMPROVED LEVER
HORSE POWER,
MADE BY
G. WESTINGHOUSE & CO.,
SCHENECTADY
AGRICULTURAL WORKS.

THE above cut accurately represents our Improved Lever Iron Power, for from four to eight horses. Fig. 1 shows the main part, with the sweeps in their position, and the connection with the band-wheel jack. Fig. 2 is a top view, showing the arrangement of the gearing, and its position in the cast-iron frame.

From our experience in the manufacture of this class of machines, and the examination made of the various kinds now in use, we think we are justified in the opinion that we have a Power which is superior to most, if not all others now in use. We have its gearing placed in a strong cast iron frame, all one piece—therefore will not rot nor become weak by exposure to the weather, as with wood frames, which let the machinery get out of place, causing it to break or wear out, besides making the Power run heavy. Powers often lose from 10 to 50 per cent. of their Power by becoming strained from their proper shape. The jack is connected with the Power by a line shaft with universal joints. The horses have only to step over this shaft. The motion can be very readily changed from that necessary for threshing to that for a Cotton Gin. The band-wheel si horizontal, which makes it convenient in threshing, as the Power may be left unmoved, while the Thresher can be changed to different positions. No arms or center are used or necessary for the main driving-wheel. The Power is conveniently arranged for moving, and easily set for working, and we believe it will be found as efficient with six horses as most others are with eight.

Price of Power with Sweeps,	$115
Price of Power without Sweeps,	110
Main Driving Belt,	16 to 20 cents per foot.

We also make Endless Chain Horse Powers, Combined Threshers and Winnowers, Threshers and Separators, Clover Hullers, Wood Saws, &c.; and upon application, will send our Circular giving descriptions of them.
G. WESTINGHOUSE & CO.,
Mar31—w&m1t Schenectady, N. Y.

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NEISHWITZ' MOWER AND REAPER.
Buckeye Mower and Reaper.
For sale by A. LONGETT,
34 Cliff-st., New-York.
Mar. 1—m3t ¦ ap. 7—w4t

WM. R. PRINCE & CO., Flushing offer 140 Hardy Native varieties of Grapes and all small Fruits at reduced rates, as per Supplement Catalogue. 50,000 Pear Stocks, very thrifty. 70.000 Osage Orange at $4. *Seeds*—Pear, Plum, Quince, Raspberries, Currants, Strawberries, and other Fruit Seeds. Osage Orange, Yellow, and Honey Locust, Norway Spruce and other Evergreens, and other Tree Seeds, &c.
April 7—w&m1t.

ALBANY AGRICULTURAL WORKS,
WAREHOUSE AND SEED STORE,
Nos. 62 and 64 State Street
ALBANY, N. Y.
EMERY BROTHERS,
PROPRIETORS.

The proprietors have recently removed into their new and spacious Ware Rooms, (five doors west of their old stand,) where they have the largest and best facilities to be found in the State of New-York, for carrying on the Agricultural Machinery, Implement, and Field and Garden Seed business in all its branches, and respectfully solicit the attention of the Farming Public and Dealers who are desirous of selecting and purchasing anything in their line, to their assortment. Their stock consists of

HORSE POWERS, suited to all purposes for which they are ever used.

THRESHERS adapted for all kinds and conditions of grain, and with or without Separators or Cleaners.

CLOVER MILLS for grating clover seed, with and without cleaners.

SAWING MILLS for farm, lumbering and mechanical purposes.

DOG POWERS for driving churns, grindstones, corn-shellers, &c.

MOWING MACHINES of the most approved kinds in use, and for which they have the agency of the Buck-Eye, Hallenbeck's, Manny's with Wood's Improvement, and Allen's—also Ketchum's and other kinds to order.

Their PLOW DEPARTMENT comprises all the varieties and sizes required in this section of country, of Plows, Horse-Hoes, Cultivators for one and two horses, Harrows, (several kinds which are adapted for all varieties of soil and culture)—all of which are made of the best materials, and finished in the highest style of workmanship, and warranted to give satisfaction to the purchasers.

The foregoing, together with the largest and best assortment of all kinds of Farming Implements, Field and Garden Seeds to be found in this city, are offered on the most reasonable terms.

For Prices, Descriptions, Terms of Sale, &c., &c., see their ILLUMINATED CATALOGUE, just published, which is furnished gratis on receipt of a three-cent stamp to prepay postage. EMERY BROTHERS,
Nos. 62 & 64 State-st, Albany, N. Y.
Five doors west of their old stand. May1—w&m1t

WILSON'S ALBANY SEEDLING STRAWBERRY PLANTS—100,000 for sale—price $1.50 per 100—$7.50 per 1000—by
C. L. TWING,
Lansingburg, N. Y.
Mar3—w7t*

THE CULTIVATOR.

THIRD — To Improve the Soil and the Mind. — SERIES

VOL. VII. ALBANY, JUNE, 1859. No. VI.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS.
ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

PRICE FIFTY CENTS A YEAR.

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THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS —144 pp. 12 mo. — price 25 cents — $2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price $1.00—sent by mail post-paid.

Waste Manures.

HORN PITHS—REFUSE OF TANNERIES, WOOLEN MANUFACTORIES, PAPER MILLS, ETC.

There is no subject of greater practical importance to the farmers of the older settled States, than that of manures; but it is not our intention at this time to go into any discussion as to the advantages of sheltering the manures of our farm stock, or of composting green manures with swamp muck, or leaf-mold from the woods, nor of the importance of saving the urine of our cattle, and the droppings of the poultry. All these subjects have been ably discussed in our journal within the past two years, and we think have resulted in much good. In this, we purpose to call the attention of farmers to a few of the waste materials that may be obtained at some of our various manufactories, because valuable manuring substances can sometimes be obtained at such places in considerable quantities, and at reasonable prices. In many places, horn-piths can be had at the tanneries by cartloads, and in those sections of the country where there are no mills for crushing bones, they are not considered of much value; but, "pound for pound," they are worth more than large solid bones, because the piths, from their more open porous structure, decompose much sooner in the soil than the more flinty solid bones of animals, and consequently are more readily available as a manure. We know a farmer who has used several cartloads of horn-piths the two past seasons, for manuring his potatoes in the hill—a pith in each hill at the time of planting, more than doubling the crop over those rows having no manure. As the potatoes are dug, the piths are thrown into heaps, and afterwards carted off and deposited in a safe place for the next year's use. They will last for this purpose, many years. This farmer pays about one dollar and fifty cents a cartload. He also occasionally obtains from the same yard, the lime, after having been used for starting the hair on the hides and skins, as well also as some of the fleshings and poor quality of hair. These are made into compost by mixing with loam or muck, and make a good and lasting manure, and at a much cheaper rate than he could procure stable manure.

The waste wool from woolen factories and carding machines, can be some times had at a trifling cost. Wool and woolen rags contain a large per cent. of nitrogen, and about five per cent. of sulphur. One hundred pounds of wool contain about seventeen pounds of nitrogen—as much as there is in the very best guano, and more than there is in thirty hundred pounds of fresh cow dung. Wool and woolen rags decompose very slowly in wet stiff soils; therefore, if used in their natural state, they should be spread upon sandy, or light, warm, loamy land, and plowed in. On such land they are valuable and lasting manures. Great quantities of waste wool and woolen rags are used to manure the hop grounds in England, and the hop-growers there, readily pay from $25 to $50 per ton for them as manure for their hop grounds. From the slow decay of wool and rags, they probably can here be most economically employed when previously rotted, by being made into a compost, and then applied to the wheat crop. We are not prepared to say exactly what our farmers could afford to pay per pound, or ton, for waste wool and rags. As far as nitrogen is valuable in guano or other manure, wool is one of the most valuable, and the farmer perhaps would not be running a great risk in paying one cent per pound for waste wool or rags.

Lime is extensively used at some paper mills, for removing the gritty substance on straw, the straw being boiled for a number of hours in lime and water. We have known this lime to be sold at a cheap rate at a paper mill. Perhaps it has lost some of its alkaline qualities by the process, but yet we think it might be profitably employed in composting with muck, loam, &c.

In some sections of the country, large quantities of salt pork, mackerel, and other pickled fish, are sold by the country store-keepers. They usually make but little or no account of the brine and salt. Farmers can frequently obtain this refuse salt at a cheap rate. Salt has not, as we are aware of, been very extensively used in this country for manurial purposes. Relying upon Mr. JOHN JOHNSTON'S statements in regard to the use of salt in growing wheat, we think it would be well for farmers to experiment with it upon their wheat crops, carefully noting the results.

The White Daisy.

Many portions of the State of New-York and Pennsylvania are infested with this weed—in many places we may observe the clear white of its abundant blossoms contrasting with the deep green of surrounding vegetation. It is hardy, and seems to flourish where other plants are starved, while on fertile soils it vies with the most luxuriant, endeavoring to outstrip every cultivated crop, and thus exhibiting to the passer-by the unthrift of every farmer who suffers its existence upon his soil. It is a very prolific weed, each root throwing up from sixty to seventy-five main stalks, each with half a dozen side branches, and not one without its seed head well filled with fully developed germs for future crops of this pest of the farm.

Upon stumpy land it is very difficult to eradicate the white daisy. But on land which can all be plowed, while they are in early blossom, just deep enough to cover them well, they can soon be eradicated. After the first plowing, allow the roots to dry for a few days, and then, in dry weather, plow again, being careful to plow well, and follow with a thorough harrowing. When the proper season arrives for sowing buckwheat, plow and harrow again, and sow thickly with this grain, and the daisy will be destroyed, if the work has been thoroughly done. The importance of bringing the soil into full cultivation while the daisy is in blossom cannot be overstated. Turn the weeds all under before the seeds begin to ripen, and with the harrow keep the plants from taking root, and they will soon give up the contest.

The seed product of the white daisy is enormous. There are not often less than one hundred and fifty heads to the single root—often five times that number, and each full to overflowing with seeds. We have found by actual count over four hundred—and placing the estimate at one-half that number for the lowest number of seed heads, per plant, we have thirty thousand seeds from one. At that rate of increase the soil upon which they are allowed to grow will soon have room for nothing besides.

Pulling them by hand we need only undertake after a soaking rain. Their roots, so numerous and so strongly fixed to the soil, will not come up at any time without a strong pull, and when the ground is dry the plants will break before they will loose their hold.

One of the best ways to keep clean of them is to use great caution about sowing them. Every farmer should be able to detect all kinds of foul seeds at a glance. The white daisy has a seed considerably larger than timothy seed, shaped somewhat like the seed of the carrot, but smooth and destitute of fuzz. Its color is light drab and brown, in parallel stripes, running from one end of the seed to the other. When once known it is easily detected.

Sheep Husbandry in England—Mangolds.

BY JUDGE FRENCH OF NEW-HAMPSHIRE.

Since my visit to England, it has seemed to me that in many parts of our country no more profitable business could be introduced upon our farms, than that of raising some of the large breeds of sheep, for the shambles, as well as for the wool. It was my good fortune to pass two or three weeks with some Lincolnshire farmers, spending some days at their houses and travelling with them through a part of Wales and England. Their sheep, it seemed to me, were a sure source of profit, as well as their main dependence for manure, enriching the land by remaining upon it while feeding off the crops of turnips. We cannot, in the cold part of America, pursue this system, but why may not we approximate towards it as nearly as may be? The mangold crop can be produced here better than in England, because it is adapted to a hot and dry climate. It can be kept in cellars as easily as potatoes. My own were stacked on the bottom of the cellar, 150 bushels in a heap, with nothing under or over them, and as fresh to day (April 11th,) as when pulled. Not one has decayed.

The letter, from which an extract is given below, is from one of my Lincolnshire friends, a farmer who knows his business thoroughly. He shows us that the mangold is sold there at *three dollars* a ton, (of 2240 lbs.) at a good profit. Every farmer ought to have his cellars full of them, to feed abundantly to his cows and sheep, and to his swine in the summer, for they will keep through the whole season, and swine will eat them raw when partly dried. Mr. Mechi of Tiptree Hall, feeds them also to his horses, and pronounces them valuable for that purpose.

But to return to our *moutons*. A one year old sheep, before shearing, which in Lincolnshire is called a *hog* or *hoggett*, is worth now from $12 50 to $17.50. What would the same sheep be worth here? By the wholesale prices in the N. Y. Tribune of April 2nd, the whole carcases of lambs are worth twelve cents per pound. The lowest prices quoted for wool, are "native and quarter Merino 42 to 45 cents" What the Lincolnshire wool is worth here I do not know, but take the English price of 37½ cents, and the average weight of meat and wool, and we have the value of such a sheep in New-York as follows, at wholesale prices:

90 lbs. of Meat, at 12 cts.,	$10.80
11 lbs. Wool, at 37½ cts.,	4.12½
Value of one year old Sheep,	$14.92½

Now why cannot our farmers give attention to this matter, and instead of producing the small fine wooled sheep, and keeping them till they die of old age, substitute a large heavy animal that shall be fed abundantly as we feed our pigs in New England, and be sold at twelve or fifteen months old, at these high rates? There is no supply of good mutton in any of our markets. The hotels of New-York get mutton from England to supply the few guests who know what good mutton is. Having thus preached the sermon, I will now give the text, thanking my good friend beyond the sea for his valuable hints, which I venture to publish, though not intended by the writer for publication. For convenience of your readers I have translated the writer's English currency into dollars and cents:

"Farming is not so good as when you were here, the price of wheat being little more than half what it was then, and not much prospect of a rise If it were not for our sheep, it would be a bad lookout for farmers. It is fortunate that so much attention has been given to the improvement of sheep of late years; we are now getting the benefit in the increased weight of wool and quality of mutton and wool both, but you would, of course, hear all about that when you were here, and would not be much surprised to learn that our hogs or one year old sheep are expected to realize from $12 50 to $17.50 each, at the spring fairs, the dead weight of such sheep being from 80 to 100 pounds, at 13 cents per pound, the fleece 10 to 12 pounds at 37½ cents per pound, the present price here. Their value last October would be from $7 50 to $8 75 each, leaving a pretty fair profit. Of course, these results involve a considerable outlay of artificial food, say $2 00 each for cake, besides turnips *ad libitum*. We are now (March 17,) in the midst of the lambing season, which has been favorable so far, with a good fall of lambs. The winter has been unusually mild; neither frost nor snow here, so that the breeding sheep have been wintered mostly on the grass lands, which is considered much better than wintering on turnips, our usual keep.

"Your favorite root, mangold wurtzel, is likely to become very general, as we have great fear that the turnip is going like the potato. The two last years they have been very indifferent. You would be surprised to see the hundreds of tons of mangolds that have passed here from the fen district, being bought by the highland farmers at $3.00 per ton—a pretty good thing for the fen men, seeing that they can grow from 30 to 40 tons to the acre—50 they say. We are trying them for sheep to eat off instead of turnips. The reports are favorable, and there will probably be some thousands of acres this season in the place of turnips.

"They would form a very valuable auxiliary I should think, with you, for the winter keeping of sheep, as I think you said you keep your sheep folded, and so you would be able to keep them always warm. The mangold being of a cold nature, I rather anticipate disappointment in the event of our winter proving severe.

"Our breed of sheep, you would remember, are the long wools, or Improved Lincolns; the old Lincoln, (a sheep about the size of an ass, and much the same symmetry,) crossed with finer breeds, the Leicester giving quality of mutton and early maturity. The improved breed, at two years old, will get to any weight you like: 200 pounds dead weight is not at all unusual, with a 12 pound fleece."

Culture of Mangolds.

It may be seasonable to give a few words of directions bow to cultivate this crop. My method last year, which I shall repeat the present season, was this:

Take any old ground suitable for corn, work it fine with the plow and cultivator, or harrow; open drills with a double mould-board plow, or by going through twice with a common horse plow, thirty inches apart. Manure in the drills with eight cords to the acre of any strong manure, coarse or fine; cover the manure with the plow, roll lightly to flatten the drills, and sow from May 20th to June 5th, one foot apart, three seeds in a hole, cover very lightly. Sow broadcast on the drills, 10 to 12 *bushels* of *salt* to the acre. Work the land after the plants appear, with the horse hoe. Thin out to one plant in a place, being very careful not to wound a plant with any tool. If the seed fails, fill the spaces with Swede turnip seed any time in June. The Mangold does not thrive well transplanted.

I tried last year the long and globe red, and the long and globe yellow. They were all good and all keep well, and I have no preference.

The Sugar beet yields about as well, and probably is equally valuable.

Hoping the sheep and mangolds will not be forgotten, I bring this article to a not untimely end. *Exeter, New Hampshire.*

Sending Grafts by Mail.

The mode of sending grafts by mail, so that, if some weeks on the way, they may arrive perfectly fresh, is becoming well understood by many. It consists in simply enclosing them in oil-silk, wrapping fine thread around so as to bring all parts into contact and making a water-tight case. One of the worst things to wrap about grafts is dry, unsized paper, which absorbs the moisture rapidly from the fresh wood. These remarks are suggested by having just received from a correspondent some grafts of the *Eiden plum*, put up simply in paper, and they had become dry enough for kindling wood. The ends had been waxed, but as shoots absorb and discharge moisture rapidly through the bark along their entire length, the waxing was of no use.

A friend once sent us in autumn, from a long distance, some apple grafts; and as they would probably be several weeks on the road, he purposely left the leaves ou as a moist casing to prevent their becoming dry. As leaves are constantly pumping out and throwing off the moisture from the shoot, the result may be easily guessed—the grafts were as dry as dead twigs when they reached us. Unwilling to lose them however, we immediately wrapped them in moss and buried them in soil, where they remained till spring. When examined, they had become swollen, plump and fresh, and being set, all grew. We have served the above mentioned plum grafts in the same way, and there is a bare possibility they may be recovered.

In another instance we had given particular directions to a friend for putting up a few scions of a rare sort, but he thought to improve upon them by first wrapping them in cotton-batting, and then applying the oil-cloth casing. The consequence was, the cotton-batting, acting as a dry sponge, absorbed nearly all the moisture from them, and they were dry and shriveled when received. The result was the same as if they had been placed in the folds of unsized paper.

It may be rather late now for these remarks to be in season, but the same rules apply to the transmission of buds at midsummer, and some of our readers may bear them in mind till that period.

Best Sheep for Mutton.

Messrs. Editors—As there has, through your columns, questions been asked and answered in relation to which was the best breed of sheep for mutton, it may not be amiss for me to add my experience to what has already been obtained from others. Three years ago last fall, while buying fat sheep for feeding in Canada, I found a gentleman that had a few fine Leicester ewes that he would part with, and I bought them. I then obtained from Messrs. Brodie & Hungerford a nice Leicester ram, and commenced sheep breeding. I raised the first year, lambs that at eight months old weighed from 120 to 145 pounds, and the next spring sheared from six to ten pounds of clean washed wool each.

Last spring I had two lambs twelve months old, that I did not wish to retain in my flock on account of being inferior to the rest, and sold them to a neighbor. They were sheared and turned out to grass alone until after harvest, or about the last of August, since which time they have had an allowance of grain and roots with some hay, daily. They were sold in January to Capt. McGraw, the great Albany sheep man, for $45, the one weighing 215 and the other 249 pounds, and he pronounced them the best sheep for their age, that he had ever handled. Quite a compliment from a man that handles his 2,000 sheep or over every week. They are now about 21 months old. Jurian Winne. *Bethlehem, Albany Co.*

Supports for Flower Stems.

Galvanized iron wire, number nine, which can be obtained at most hardware stores, cut into proper lengths, makes the best supports for the stems of plants of anything we know of. They are not half as much trouble to make, and are more neat than wooden rods; they need no paint, never rust, and can be used year after year. Tie the flower stems to the rods with bass matting or loosely twisted twine. For tall growing plants use nail rods, cut into proper lengths, and painted green. G. B. H.

The Apiary.

Construction of Hives.

It is now time for all who intend increasing their stock or changing their system of management to be making preparation. I would submit the accompanying drawings to the judgment of your readers, and hope they may call forth some further improvement. The hive is simple, cheap, durable, is easily handled, and affords sufficient protection for this latitude, and not difficult to construct.

Description.—The hive is made of inch stuff Inside measurement 14 inches wide, 18 inches long, 10 inches deep. Top the same size—total height inside, 20 inches. The drawings are ¾ inches to the foot. *a. a.* in all the figures, represent stops, screwed on the body of the hive, to hold the top in place.

Fig. 1., *b.*, projection of 4 inches for a lighting board—*c. c.* entrance.

Fig. 2. "Spare honey board," or cover in position, being ½ inch longer and wider than the interior of the hive, leaving a ½ inch margin for the top to rest upon—4 holes and space for 4 boxes 6 inch. square.

Figs. 3 and 4. Sections showing how the cover and also the sides of the top are beveled—*d. d.* end and side view of frames in position.

Figs. 2 and 4.—*b. b.* battens to keep cover from warping, screwed on.

Fig. 5. Body of the hive—fig. 4 and *b.* fig. 5, show the front and rear, cut down to receive frames or slats, ¾ inch deep by ½ wide.

I consider any further explanation unnecessary.

If "movable frames" are not used, slats should be ¼ inch thick and 1 inch wide, ½ inch apart, nailed in place slightly, just enough to keep from moving. The expense of this is a mere trifle, and if you should afterwards wish to experiment with, or to adopt the "movable frame" system, you can readily remove the slats, cut out the comb, and transfer the frames; and should you wish to "take up" such a hive, it is much easier to cut out the comb than in an ordinary box hive, and the expense of construction is nearly the same. This is one of the many advantages in having a hive shallow.

The Rev. L. L. Langstroth, who has the right of "movable frames," has a hive of double construction, and entirely surrounded by glass, which, for purposes of observation, it is well to have, and also his single frame observatory hive. In the latter, the queen may be seen at all times. This I mention for amateurs.

For general use I prefer the pattern here given; the interior dimensions are the same as Mr. Langstroth's.

The Chinese use a hive with a movable top, and when they wish to remove the honey they stupify the bees with smoke, and cut from the top, where the best honey is always stored. Until within a few years we have not managed any better than the Celestials, and many throughout the country do not manage as well as they.

By the use of smoke, one can always safely remove the cover of the hive and judge as correctly of the condition of the interior as they could, by looking through glass sides, and, for utility, I would as soon think of putting a pane of glass in the side of a potato barrel as in a bee-hive with movable cover. Some may think there is a loss of material in having the top as deep as the body of the hive. The loss is trifling, and, in using frames, it is very convenient to reverse the top, and deposit the frames in it during an inspection, for purpose of experiment, etc. To prevent the entrance of rain, the front should rest an inch or two lower than the back. E. P. *New-York.*

Fig. 3.

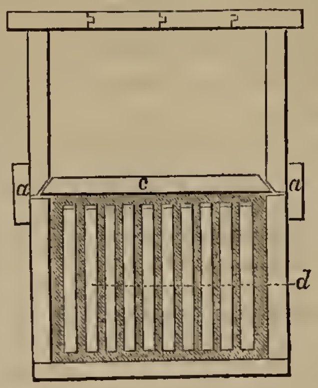


Fig. 4.

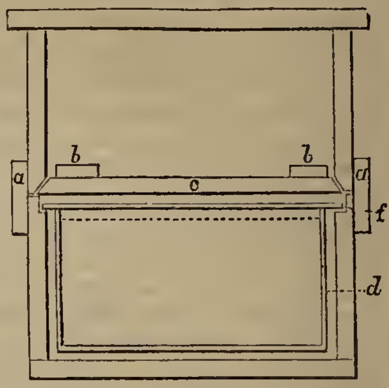
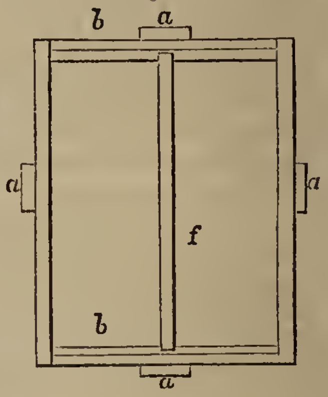


Fig. 5.



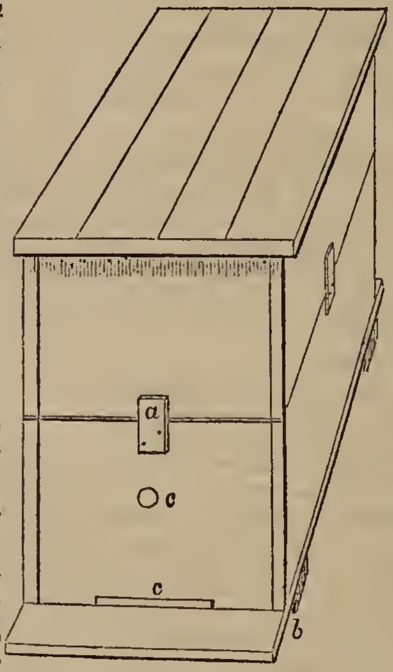


Fig. 1.

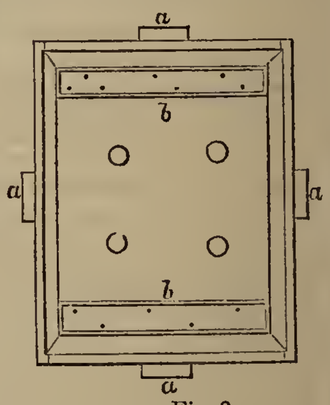


Fig. 2.

* * *

To Prevent Potatoes Sprouting.

Some advise to put potatoes for summer use in barrels and occasionally empty them from one barrel to another, but I have found that a much more effectual way to prevent their growth, is to shake them in a basket. Take a common basket that will hold a bushel or more; fill it half or two-thirds full, and after giving a good shaking, if the sprouts are long, you will find most of them at the bottom of the basket, and the remainder completely "scotched." It is a more *pleasant*, *certain*, and vastly more *expeditious* way than sprouting by hand. Try it. H. V. Welton. *Waterbury, Ct.*

Recipe for Corn Bread.

Messrs. Editors—We have noticed several recipes in the Co. Gent. for making *corn bread*, most of which we have tried, but think none of them equal to the following, which we send you, hoping that every good housewife will give it one trial, and our word for it she will never abandon it. The advantages claimed over other recipes, are,

1st. Sweeter and better bread.

2d. Easier made, as no kneeding is required.

3d. No milk, sweet or sour, is required—neither *rye meal*—so it can be made by all classes, whether they keep a cow or not.

For two loaves—take—

6 quarts Indian meal,
3 quarts wheat flour,
½ pint good molasses,
1 pint good yeast.

Add warm water enough to reduce it to a thick batter—pour it into the dishes intended to bake in, and set in a warm place to rise. Bake three hours in a *Stewart's stove.* Eat *warm or cold.* Mother. *Orleans Co. N. Y.*

Cure for Chilblains and Frosted Feet.

Apply common tar to the parts affected, and bind it up with cloth, so as not to interfere with wearing the stocking. Wear this four days or a week. This I know is a sure cure, though it does not cost much. W. A. R.

Proper Depth for Covering Grass Seeds.

About a year ago we published several articles on the proper depth of covering grass seeds, in one of which we gave a table, showing the depth in inches and fractions of an inch, at which the greatest number of seeds germinate; also the depth of soil, in inches and fractions of an inch, at which only half the seeds germinate; and further, the least depth of soils in inches and fractions of an inch, at which none of the seeds germinated.

For the benefit of our new subscribers, we republish the table:

Orchard grass,....	0 to ¼ inch,	¾ to 1 inch,	2½ inches.
Timothy "	0 to ¼ "	¾ to 1 "	2 "
Red Clover, ...	0 to ½ "	1¼ to 1½ "	2 "
White Clover,....	0 to ½ "	½ to ¾ "	1½ "
Tall-Oat grass,....	½ to ¾ "	1½ to 1¾ "	4 "

The first column shows that the five kinds of seeds germinated as well on the surface of the ground, as those that were covered from one-fourth to three-fourths of an inch; but it is proper to say that the soil used in the experiments to ascertain the proper depth of covering, was kept moist during the process of germination, though freely exposed to the light, which accounts for the large number of seeds germinating without any covering whatever.

Only one-half of the several kinds of seeds germinated, when covered at the depth specified in column second; and none of the seeds germinated when covered at the depths specified in the third column. The above statements no doubt will surprise many farmers, but we presume they are nearly or quite correct, for the experiments were made by the Messrs. Lawson, eminent seedsmen in Edinburgh, who "have paid much attention to this subject, and whose experience and observation in the practical culture of grasses, has been largor and moro extensive than those of any other seedsmen."

If, as stated by Messrs. Lawson, red and white clover and timothy seeds, fail to germinate when covered two inches deep, we think many farmers lose a large portion of the grass seeds sown by them. To save time in sowing their seeds, somo farmers wet their seed oats, rye, and wheat, mixing the grass seeds with the wet grain; the small seeds adhering to the grain, can be sown perhaps more evenly than if the dry seed is sown alone. But as the grain is sometimes plowed in with a shallow furrow, or worked in by the cultivator, or moro frequently by several harrowings, it is probable that much of the grass seed gets buried too deep to vegetate. We have occasionally known farmers to sow their wheat and grass seed on the furrow, and then harrow crosswise the furrow, for the express purpose of burying the seeds deeply, thinking the young grasses would much better stand the drouth if the seed was deeply buried, not even suspecting but what the grass would come up if buried six inches deep. More seed wheat will vegetate when covered from one to two inches deep, than if covered deeper. In October, 1857, says Mr. Klippart, Cor. Secretary of Ohio State Board of Agriculture:

> "I sowed some wheat on the surface of the soil, some at the depth of one, three, four and seven inches. That on the surface and at one inch, germinated and came above ground in six days; at three inches in eight days; at four inches in ten days; at seven inches in eighteen days. Unfortunately, my arrangements to ascertain the proportion at each depth that came above ground of the whole number sewed, was interfered with, but there were two or three only out of a hundred at seven inches, that came above ground, and they perished during the few cold days in November. My impression is that about three-fourths of that sowed at four inches came up; all of that at three inches, and all at one inch; all that on the surface not destroyed by birds, germinated."

If not more than three-fourths of wheat covered four inches deep came up, under the carefully conducted experiment of Mr. Klippart, there can be no question but that a considerable portion of broadcast sown wheat fails to germinate, in consequence of being covered too deep in the process of harrowing; but the loss of seed wheat must be light, compared with that of the minute seeds of grass, which become buried so deeply when sown and harrowed in with the wheat.

Some persons, perhaps, may ask, if there is so much loss of grass seed in covering it with the harrow, what is the remedy? Will it do to sow the seeds upon the surface of the ground, and leave them to their fate? Perhaps not. After a field is sown with grain and sufficiently harrowed, the seeds may be sown, and by passing a heavy roller over it, the seeds will be sufficiently imbedded to warrant a nearly perfect germination; but if the roller is not to be used, then it might be the better way to pass a light harrow over the land, after the grass seeds are sown.

Within the past three years, we have stocked down many acres of land. The grass seeds have been sown both in spring and autumn; but none of the seeds were sown till the rye, wheat and oats had been harrowed in. The seeds then sown and rolled in; and in no instance have wo failed to get a good catch of grass. We are confident that we get a better stand of grass, than we did when we sowed the grain and seeds together, and gavo the ground a thorough harrowing; and should prefer sowing the grass seeds after the grain was harrowed in, and leaving them to their fate without rolling the ground, than to sow the seeds with the grain, and harrowing in as we formerly practiced.

If any of our readers are doubtful about this manner of sowing grass seeds, they can easily satisfy themselves in regard to it, by sowing portions of their fields with grain and grass seeds, and giving them several harrowings, and defer sowing the grass seeds on other portions till the grain is fully harrowed in; then sow the same proportion of grass seeds, and finish off with the roller.

The usual high price of grass seed, should prompt farmers to experiment with it in different ways; and by so doing, they can ascertain the safest and most economical manner of stocking down their fields. It makes a material difference with most farmers, in stocking down land, whether they got a good or a poor catch of grass, and the difference may sometimes depend very much upon the manner of putting in the seed.

We hope many of the readers of this paper will try the experiment of sowing grass seed, both with the grain and harrowing in, and not sowing till they have finished harrowing, and carefully note the results, and mako them known to the public through the columns of tho Country Gentleman.

Draining—Feeding Stock, &c.

Messrs. Editors—On my late visit to Albany, I called on Mr. Jonathan Talcott, near Rome, Oneida, who some eight or ten years ago had a good deal of correspondence with me on draining, and lately kindly invited me to visit him, and see what he had done and was doing. I have never witnessed a greater improvement made on land, than he has made and is making. The land that he has drained, you can walk on as firmly as on a carpeted floor, while that along side was a mire. His drained land raises excellent crops of potatoes, and is very profitable—also first rate oats, corn and barley, and very large crops of timothy hay. It is actually surprising to see what perseverance in draining will accomplish in rendering such land productive, yet, strange to say, his neighbors are still looking on *doubtingly*, but I think their understanding must be opened pretty soon by the doings of Mr. T. When he gets the tiles laid he has now on the ground, I think he said he would have over 40,000 laid, besides having some of his first drains laid with stone.

The subsoil on his farm is rather singular, part being a very stiff clay, and part coarse gravel. Whenever he comes near the highest ground, it is all coarse gravel. There the water gushes out very fast. His whole farm has very little rise. Some small ridges he thinks don't need draining, but if the drains that come up to their base dont relieve them of water, I have no doubt he will ultimately drain them. He gets an excellent outlet for his drains in the ditches along the railroad.

Mr. T. labors under a disadvantage in draining, having his tiles to bring from your city by railway; still the draining of his farm must pay him a very large profit. It would pay wonderfully for hay, if used for nothing else. The land he was draining when I was there, would produce nothing until drained, unless it might be some pasture during the dry weather in summer, but no other time.

Mr T. was born on the farm, and his grandfather owned it a great many years ago, but it seems they never thought of applying art to improve it, until the third generation, and Mr. T. must now be a man of about 45 years. There are many thousands of acres of similar land in that neighborhood, that could be likewise improved, if the owners had the enterprise to undertake it, and I have no doubt they will wake up by-and-by.

Mr. T. keeps about 40 cattle—a considerable part of them full blood Short-Horned Durhams of the best blood; the others are high grades, but I think if he were to reduce his stock, and give the others better keep, he would find it more profitable. I know a noted breeder of imported cattle, who condemns the practice of keeping breeding stock in any more than common condition. I think that is true, if the common keep is good enough; but there is a great difference of opinion with regard to common keeping. The common keeping in general, is bad in the extreme. No matter how good the breed may be, of either cattle or sheep, if kept in the common way, their progeny will soon degenerate, and they will soon become common stock, if not worse. It is somewhat singular that you can seldom go into a farmer's horse stable, but you find his horses in very fine condition; but go into his cattle and sheep yards, and you seldom find them in good order. I have heard many farmers say they cannot afford to feed their cattle and sheep as I do, as they would be a losing concern, and would ultimately ruin them, as they could never sell fat cattle and sheep at such prices as I do; no one would come to them and pay them such prices; but the truth is, they never make anything very good. Thirty-five years ago I thought myself worth less capital than any farmer in this town, and I fed my stock as well then as I do now; and it was by good feeding I made them pay a profit on their keep. It never pays to keep stock of any kind unless you are improving them, and far worse when they are in a losing condition for five months of the year—and thousands are so kept, and will be until farmers will give thought to the subject.

One pint, oat and corn meal mixed, daily with hay, will make a fine yearling in spring, and one quart daily through winter, will bring two year olds in fine condition to grass, and they will pay far more for the grain than if the grain had been sold for cash. Barley meal, oil-cake meal, or even buckwheat meal, will answer. Try it, farmers, and I am sure you will find it pay. A pint a day for a calf, say for six months, would be less than three bushels; but if you give four bushels it will pay you abundantly for the grain—twice as much as you could have got in market. It may not do so every year, but for a number of years I know it will be so. I know it has been so in my case, and will also be so with every one that tries it; but the great difficulty with many is, they never think of feeding grain to either cattle or sheep until they get so poor that they are afraid they will lose them; then it is like feeding roast pork and beans to a man beginning to recover from a fever; it will do harm. The right way is to begin feeding grain when the stock is in good condition, and keep them improving all the time. JOHN JOHNSTON. *Near Geneva.*

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Pigs more Profitable for Fattening than Old Hogs.

MESSRS. EDITORS—Having tried an experiment with both kinds the past season, I am disposed to give you the result, hoping that others may also try a like experiment—upon a more even scale as to season of year—and report through your paper. In this way farmers may, through the medium of an agricultural paper, increase their annual income more than ten times the cost of such a paper.

In Sept, 1857, I bought two pigs at $2 each, and kept them until Dec. 14th, 1858, which was the time they were butchered. They had been fed about 60 bushels shelled corn—about half of it ground and scalded, the other half having previously been fed in the ear. The feed, other than corn, is in both experiments offset against the manure made by them. They weighed respectively when butchered, 332 and 344 lbs.

On the 26th of August, 1858, I bought two other pigs, bred by the same sow, and at the same price. They were fed mostly upon sweet apples, with a few raw potatoes and a few nubbins of corn, until Dec. 15; then commenced feeding them with corn boiled until soft, and fed cold. This kind of feed was continued about two weeks, when their feed was changed to scalded meal, which feed was continued until Feb. 8th, when they were butchered. Their respective weights, 237 and 244 lbs. They had been fed about 25 bushels of shelled corn, in form as above described. The old hogs were about seventeen months, and the pigs three days less than seven months old, when killed. Valuing the corn at 80 cents per bushel and the pork at 8 cents per lb., the account stands as follows:

Old Hogs.	*Dr.*	*Cr.*	*Pigs.*	*Dr.*	*Cr.*
To cost of pigs,-	$4 00		To cost of pigs,-	$4.00	
To 60 bu. corn, -	48 00		To 25 bu. corn, -	20.00	
By 676 lbs. pork,		$54.08	By 483 lbs. pork,		$38.64
	$52 00	$54.08		$24.00	$38.64

It will be seen that the pigs yield a profit of $14 64, while that of the old hogs is only $2 08, to say nothing of the extra *time* and trouble in taking care of the old ones. WM. E. COWLES. *West Winsted, Ct.*

It appears to us that "S. N." of New-London Co, Ct., in your paper of Feb. 3d, must have overrated the value of what he has raised the past season. How much of his potatoes, corn, and other grain, did he use up in fattening his pork and poultry? W. E. C.

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Scouring Knives.

A small, clean, potato, with the end cut off, is a very convenient medium of applying brick dust to knives, keeping it at about the right moisture, while the juice of the potato assists in removing stains from the surface. We can get a better polish by this method than by any other we have tried, and with less labor. AMANDA.

An Average Farm.

In our *resumé* of the requisites of a Good Farm, we promised some notice of the characteristics of a class of farms more frequently met with than any other—those which occupy the middle place between good and poor in management and condition—which we have called the Average Farm. In so doing, we may offer some suggestions worthy of the attention of our farming readers; few of whom, we dare say, but will find at least one thing to remind them of the chances for improvement seen at home.

The Average Farm has a *soil* of varying fertility—varying with its original character and quality—has never been like the Good Farm, so managed as to make its whole area productive. Much improvement may have been made, but there is more remaining undone—fields to clear and drain—meadows and pastures to break up and bring into more profitable tillage—corn lands to manure and subsoil—swamps to reclaim—soils to ameliorate, etc., etc., to bring out its full power of growing food for man and beast.

The *culture* or preparation of the soil for the different crops on the farm under notice, is of a medium character as to timely thoroughness. Some crops are sown on well prepared ground, in proper season; others are hurried over and neglected, for on an aveage, farmers *undertake more work than they can fully accomplish.* Hence we find imperfect and shallow plowing, insufficient or no manure, careless and unseasonable seeding, and neglected after-culture and harvesting. The great distinction between a good and an average farm, lies not so much in the soil as in the cultivation and management of the same.*

The *fences* are but just up to the necessities of an average farm—too often illy arranged and poorly constructed. In many cases the division fences still run as the land was first cleared, and might be placed so as to accommodate the present condition of the farm far more conveniently.

Fair *buildings* are generally found on the average farm—for farmers generally take more pride in these than in the excellence of their farming. But they are too often inconveniently arranged and situated, and in out-buildings insufficient to meet the wants of the stock, implements, grain and winter forage, for shelter. Working animals are usually stabled, but cows and sheep oftenest spend the winter out of doors, or with only the protection of crowded open sheds. The comfort and convenience of the housewife do not receive the needed attention, in the preparation of wood and dairy rooms, and a well arranged cellar, and convenient well and cistern, while a farm work-shop and tool-house are often entirely neglected.

The arrangements for making and saving *manures* are far inferior to what they should be—to what they profitably might be. Too often the yards afford fine facilities for *leaching* and wasting the life-blood of good crops—too often not the least attention is given to prevent its burning or fire-fanging in the heaps under the stable windows, and no care is given to provide absorbents to largely increase its quantity and improve its quality. The neglected fertilizers of the country, properly husbanded and applied, would double the products now produced, beyond all question.

An average *orchard* has received the attention of grafting, but too frequently the trees show that they are poorly cared for. The farmer forgets or refuses to believe that judicious cultivation and manuring, are as necessary to abundant crops of fruit as to those of grain. It has been demonstrated again and again that fruit culture pays large profits; still our orchards are inferior in character and value to what they might easily be made by the selection of better varieties, and proper attention to their culture and marketing.

The *garden* for fruit and vegetables is seldom what it should be, on an average farm. Lack of attention here deprives the farmer and his family of many a cheap luxury, and subjects him to inconveniences and expenses which might well be avoided. Good garden fruits and vegetables promote health as well as satisfy the appetite. Though they may not seem to pay as well as field crops, they really return a larger profit so far as needed for family use.

The *stock* on an average farm is usually of a very varied character. Too little care is given to the selection and breeding of animals—a cow is a cow, whether valuable for the dairy or comparatively worthless—a sheep is a sheep, whether it produces a profitable return or otherwise, and a hog is a hog, though it may be ever so difficult to bring it into the form of pork. More generally, however, the farm has some good animals and more poor ones, too little discrimination and reflection being given to this important subject—important to all who would make money by stock.

To conclude, we will state our conviction that the average as above indicated is annually becoming elevated in character. There are thousands now, for hundreds formerly, who are seeking to bring their farms as near as may be to the best. Soils are being enriched and improved, underdrains are reclaiming our wet and heavy lands, better systems of cultivation are coming into practice, better fences and buildings may be seen in almost every section, largely increased attention is given to manures, orchards are receiving their appropriate care, gardens are less neglected, while our stock is becoming better, and really fine animals may be found in almost every neighborhood. Let us all strive to hasten on the work—we, by collecting and diffusing information on the best methods of farm culture and management—and the farmer, by a thoughtful yet energetic application of all the means and appliances within his reach, really tending to the improvement of agriculture. Thus shall the products of farm labor become as certain and as large as in Great Britain, while they tend far more to the real elevation and advancement of those who produce them.

People's College, Havana.—We see it stated that the Hon. **Frederick Holbrook** of Brattleborough, for several years President of the Vermont State Ag. Society, has been invited to accept the professorship of Agriculture in the new People's College at Havana in this State. Mr. H. has, however, we regret to have to add, after mature deliberation, declined to accept the position.

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* "The greater certainty and generally larger yield of the crops of England and Scotland over those of our country," says Mr. Howard, since his examination of the agriculture of those countries, "proceeds in a considerable degree from the better preparation of the soil. By this we do not mean, altogether, the actual *richness* or manuring of the soil—we mean more especially that mechanical condition which affords the crop all practicable advantages. They study," he adds, "the adaptation of plants to soils—from close observation they have learned the special requisites of different crops. If the soil is deficient in any of these, and they can be economically applied, the first step is to apply them."

The White Grub Worm.

Among the various insects that are occasionally so very destructive to our farm crops, the white grub worm in some years, and in many sections of the country, appears in vast numbers, doing immense damage to the mowing fields and the cultivated crops. The parent of this grub is a brown beetle, some times called the May beetle or door-bug, of a chestnut-brown color, nearly an inch in length, and about half as broad. These beetles issue from the ground about the middle of May, and are some times very numerous as well as annoying while on the wing in the evening. In their droning flight they move very irregularly, darting hither and thither with an uncertain aim, hitting against objects in their way, with a force that often causes them to fall to the ground. They frequently enter houses in the evening, apparently attracted, as well as dazzled and bewildered by the lights, and frequently causing much fright and trepidation among the females and juveniles of the family circle.

The beetles, while upon the wing, in certain seasons, and in particular districts, some times do incalculable mischief in devouring the leaves of trees over large sections of country. Mouffet relates that, in 1574, such a number of them fell in the river Severn, as to stop the wheels of the water-mills.

Various animals and birds feed upon the beetle; weasels, rats, skunks and bats destroy immense numbers of them, as also dung-hill fowls, night hawks, and the crow. The skunk and crow also destroy large quantities of the white grubs, the larva of the May beetle, their instincts enabling them to seek the grubs with certainty when embedded some inches below the surface of the soil. The recent high price of skunk skins (readily selling from fifty cents to a dollar per skin,) has caused in some parts of the country, the trapping and shooting of an immense number of these striped backed essence peddlers. It would be far better for the community at large to protect both crows and skunks by legislative enactments and penal laws, than to suffer such havoc among them, as there has been of late, by 'powder, traps, dogs, and strychnine.'

To exhibit the great benefit the farmer derives from some of the insect destroyers, we quote from "Anderson's Recreations." It is stated that "a cautious observer having found a nest of five young jays, remarked, that each of these birds, while yet very young, consumed at least fifteen of these full sized grubs in one day, and of course would require many more of a smaller size. Say that on an average of sizes, they consumed twenty each; these, for the five, make one hundred. Each of the parents consume say fifty, so that the pair and family devour two hundred every day. This, in three months, amounts to twenty thousand in one season. But as the grub continues in that state four seasons, this single pair with their family alone, without reckoning their descendants after the first year, would destroy eighty thousand grubs. Let us suppose that the half, namely forty thousand, are females, and it is known that they usually lay about two hundred eggs each, it will appear that no less than eight millions have been destroyed, or prevented from being hatched, by the labors of a single family of jays. It is by reasoning in this way, that we learn to know of what importance it is to attend to the economy of nature, and to be cautious how we derange it by our short sighted and futile operations."

Jays sometimes help themselves to the ripening corn in the field; but in 1855, the white grub destroyed more corn for us, than the jays did for the farmers in the whole township, and last season the grub was nearly as injurious to our corn.

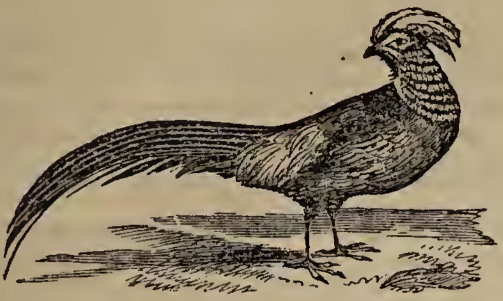
Says Dr. FITCH, "with regard to remedies, we may observe, that in Europe the experience of centuries has failed to discover any efficient measure for destroying a similar insect during its larva period of existence. And concealed in the ground as these grubs are, it is not probable that any substance can be applied to the soil of sufficient power to kill them, without destroying also whatever vegetation is there growing."

The Dr. suggests a plan that might sometimes be put in practice. When the grubs are so numerous as to sever the grass roots, as is sometimes the case, he recommended the placing of a temporary fence around that portion of the field thronged with these grubs, and enclosing a number of swine therein, thus for a while converting the patch into a hog pasture. By so doing, the hogs would feed themselves; the grubs would be exterminated, and the land would be manured, cleansed, mellowed, and well prepared for immediately lying down to grass again, or for receiving any rotation of crops for which the owner may deem the spot best adapted. From our own experience, we think it would have been better for us to have let these grub-infested fields lain fallow than to have planted them with corn. When hoeing the corn the second time, we found in nearly every hill from one to three or more, of the full-sized grubs about the base of the plants, the roots of which they feed upon. We undertook to dig them from the hills of corn, but the remedy was about as bad as the disease, as we necessarily broke many of the remaining roots, much to the injury of plants. The result was about a third of a usual crop. If we had kept the ground fallow, and harrowed over as often as the weeds started, perhaps we should have starved the "critturs;" but as it was, they found support from the corn, and during the winter and spring passed through the change from the grub to the perfect or winged insect, and the next May emerged from the ground in swarms—deposited their eggs for another brood of worms, that will probably commit similar ravages. We shall be cautious in future about planting corn on land badly infested with these grubs.

Brine a Cure for Warts.

MESSRS. EDITORS—Having seen in the March number of THE CULTIVATOR, a recommendation of a method of curing warts on horses, which seems to me to be very cruel, I am induced to write my experience in curing them, believing that warts have one origin, and are the same, and the same remedy will cure, on whatever animal they may be found. It is some years since I saw a young man in Salem, Mass., the back of whose hands were literally covered with warts, many of them large and seedy, and very troublesome. I told him to go and wash his hands in the tide water in the floom, (he worked in a tide mill,) three times a day for one week, and to use plenty of soap, and in a few weeks his warts would be among the missing. He took my advice, and the warts left in about two months.

Cows often have warts on their udders. I have seen many, and some very bad, which I have cured by simply washing them after milking, for one or two weeks, with brine, which is my only remedy, and has never failed of a cure. S. P. *Markesan, Wis.*



The Golden Pheasant.

Of all the Pheasant species, the Golden is the rarest and most beautiful. The male bird, when in full plumage, which does not occur until their second year, measures nearly three feet in length, including his tail, which alone forms about two-thirds. The feathers of the fore part of the head are very long, silky, and of a bright yellow ; and considerably overhang those of the hinder part, which are of a brilliant orange, marked or bordered with transverse rays, forming a kind of cape. The last are elongated and extend backward over the sides of the neck, which may be raised or depressed at will. A few minute hairs are scattered over the cheeks which are of a livid complexion. The feathers of the neck are tinged with a mixture of green and gold, and bordered with black ; those of the back are steel blue, and the upper tail coverts are bright yellow, the latter terminating in a crimson border. Breast and under parts deep crimson. Wings brown, scapulars dark blue, legs dark color. The long tail feathers are brown with small darker transverse bars.

These magnificent birds are natives of China, and it was warmly maintained by Buffon, in accordance of his theory of the degeneration of animals, that they were merely a variety of the common pheasant, which had assumed a more splendid plumage, in consequence of the superior fineness of the climate in which they dwelt. Unfortunately for this hypothesis, the common pheasant is also widely spread throughout the same region, in which it preserves all the character by which it is distinguished in Europe, and never produces in its wild state a mixed breed with its supposed variety. No naturalist since Buffon has imagined such transformation possible.

The specimen from which our figure was taken, was bred at Springside, and is now running in the poultry yard with the fowls. They are a restless and timid bird. Unlike most other birds, they are very abusive and savage to their mates, at the time of nidification ; they tease and peck the head of the female bare to the skull, which often proves fatal, as it did in our case ; the hen died.

Mr. **John Giles**, who has been very fortunate in rearing the Golden Pheasant, in a letter to the writer says : " We have found pheasants as easy to raise as chickens. We set the eggs under Bantam hens. When hatched, confine hen and young with boards ten inches high and ten feet square ; the boards fitting close to the ground ; in a day or two the young pheasants will get used to the note of the hen. Feed with hard boiled eggs chopped fine with lettuce. In a week or ten days give them coarse ground meal and lettuce chopped fine with it. Mix with milk."

Although the pheasant can be tamed and will feed with the poultry, yet an innate timidity prevents it from being thoroughly domesticated. Young pheasants, we are told, scamper off in terror if any unexpected intruder makes his appearance among them, although the remainder of the poultry remain perfectly unconcerned. **C. N. Bement.** *Springside.*

Good Yield of Milk.

The following is a statement of the milk from my cow "Fillpail," during the month of December last. She dropped her calf the 23d of October. She is seven years old, seven-eighths Durham. The milk during the 31 days weighed 1,002 pounds. I weighed one quart of the milk, which was two pounds six ounces. Allowing the milk to weigh alike, it would give 421 17-19th quarts, which is a little more than 13½ quarts daily. Her food was corn and oats ground, four quarts of which was given to her daily, with as much good rowen hay as she would eat.

I think the above is a good yield of milk, considering the season of the year in which the trial was made. **Jas. Child.** *Deerfield, Mass, Jan.* 22, 1859.

Rich Milk.

Messrs. Tucker & Son—Mr. **C. W. Gilman** of Pine Meadow, (New-Hartford,) Ct., is engaged in selling milk, and milks twelve or fourteen cows during summer and winter. He has in his dairy a small cow five years old, which dropped her calf in November. Her milk was observed to have a very rich appearance, and he had a curiosity to test its butter qualities. Accordingly her morning's "mess" was put in tin pans, and after standing some thirty-six hours, two pounds twelve ounces of cream was taken off and churned, or stirred into butter in a few minutes. The butter as it came from the churn weighed just two pounds, and when thoroughly worked, one pound fourteen ounces, of a quality equal to the best. The milk was not measured *before*, but after being skimmed, measured six quarts. Assuming it to be seven and half quarts when strained—which would probably not be far from it—this would be at the rate of a *pound of butter to four quarts of milk*—two and three quarter lbs. per day. She gives eleven quarts of milk per day. If any one has a cow that can produce more than a pound of butter to four quarts of milk, or if he can produce a *record* of one that has done it, he can "take the hat." **Geo. W. Loomis.** *Torrington, Ct., Dec.*, 1858.

To Prevent Cows from Kicking.

Messrs. Editors—Having had several kicking cows I have long been seeking for a preventive, and after having tried coaxing, whipping, strapping up the fore leg, and various other said-to-be remedies, none of them answering, I had at last concluded to feed a very fine heifer for the one fault only, when happening to mention the subject one day to an old farmer, he remarked that he never had any trouble with kicking cows as he had a very easy way of preventing them. I inquired of him his plan, when he gave me the following, (one that I have never seen in print,) and I send it to you hoping it may benefit many as it has me :

Take a rope or strap about three feet in length, and make a loop at one end, then carefully place the loop end around the hind legs just above the knee, run the other end through and draw the legs together as close as possible, then wrap the remainder of the rope around the part encircling the legs, and fasten. When properly adjusted it is impossible for a cow to kick. **Grazier.** *Chadds Ford, Delaware Co., Pa.*

Preserving Eggs.

Eds. of Country Gentleman—I have recently read a new and perhaps a good recipe for preserving eggs at least two years, so that at the end of that time they will be fit for either hatching or eating purposes. Sceptical as your humble servant has heretofore been on that subject, he must confess that it looks reasonable. It is extracted from a recent work published by Cooper & Vernon, of Media, Dealware Co., Pa., entitled "Game Fowls, by J. W. Cooper, M. D." The following is the recipe :

" Dissolve some gum shellac in a sufficient quantity of alcohol to make a thin varnish, give each egg a coat, and after they become thoroughly dry, pack them in bran or saw-dust, with their points downward, in such a manner that they cannot shift about. After you have kept them as long as you desire, wash the varnish carefully off, and they will be in the same state as they were before packing, ready either for eating or hatching."

This is from good authority, as the author of the work has been engaged for the last 30 years in raising nothing but the best game fowls, and as he has frequently imported eggs, he invariably directed them to be packed as above, and always had good success in hatching them, notwithstanding the time and distance of their journey. Dr. Cooper's game chickey at Media, is of itself a grea curiosity, and a credit to any poultry raiser. **J. L. W.** *Media, Pa.*

To Put a Candle Out Without an Extinguisher.—Hold your hand directly over it, and give a smart puff. If the wick is not so long as to need snuffing, it will do it "sure," with very little smoke. Try it on a lamp—I never have. W.

New Plan of Growing Potatoes.

MESSRS EDITORS—The past season I have discovered a new system of raising potatoes, (at least new to me,) and it in every way surpasses the one-eye system. I also think it will at once settle the question of opinion as regards small and large potatoes for planting—also whole or cut potatoes. This is no theoretical idea. It is gleaned from my practical experience, as I advance nothing that I do not first practice myself. When I first brought the one-eye system to notice, very few believed in it, and as to the after culture, it was also called "suicidal." However, after a trial, both the cutting and culture have proved all that I stated; and why not? I did it, and why not others? It was said that there was nothing to support the stem; that I then explained. This new system will fully prove that in my assertion I was correct From the fact of the one-eye system and its management being cavilled at by very large and experienced potato growers, I thought I would try some other system to surpass it, and I think that I have succeeded. The result may seem strange, but what I state can be attested to by a large circle of your readers, as I called their attention particularly to them during the growth, and wished them to be particularly noticed, as I should refer to them after, at the same time not giving them any information as to how they were raised, merely telling them that they were neither cut nor whole potatoes that were planted—cuttings nor layers. Not knowing what the result might be, I did not wish the process to be known.

When opening our potato pits in April, 1858, they had sprouted from a quarter to two inches in length. Before selling, the sprouts are rubbed off, by passing through the hands, and thrown away. I left mine on the ground, and in stripping the pits I threw some mold over them, merely to keep the sun from drying them. In this way I left them for about a fortnight, in which time they had made nice fibrous roots, and produced stems—(the principal root elongated to a stem, and threw out leaves on the surface.) I should call it all a root, but Dr. Lindley, our highest authority in Botany, says, no matter how much a branch may resemble a root, when over ground it is a branch, even though it should neither produce leaves or stems.

Some of those sprouts were not more than a quarter of an inch in length, and some were two inches; all of them grew the same throughout the season. One thing I particularly noticed in the growth of these sprouts was, that their over ground stems were much stronger than from whole or cut potatoes; particularly on their coming to the surface, the difference was as visible as between a plant that is grown in the back of of a green-house, and one that is grown close to the glass. This fully satisfied me that it made no difference whether the cut potato was large or small. The number of roots also attached to those sprouts, were from time to time as numerous as they are to cut potatoes, being in fact a web of roots. This also proves that it is not, as some assert, from the tuber that the stem derives its nourishment—but as I have at all times stated, it was from the soil and roots that the potato stems made their growth, which was my reason in recommending cut potatoes to be always set with the eyes at bottom of the drill; having a greater number of roots they of course grow quicker. There was no care taken in removing the sprouts of the potatoes; they were merely passed through the hands and thrown one side as we proceeded in opening the pits.

I selected a piece of ground adjacent to where we had Prince Alberts, (the land being of the same quality,) so that the experiment should be equal. There was between a quarter and half an acre. I opened drills same as for setts, thirty inches apart, five to six inches deep, and dropped these sprouts, some that had leaves and some without, twelve inches apart, and covered with the plow. This proved that I was right in recommending covering the stems, which, when first brought to notice, it was asserted strongly by very large potato growers, that they would never see light again; but we are all likely to err. All their subsequent treatment was precisely the same as I practice with the one-eye-system.

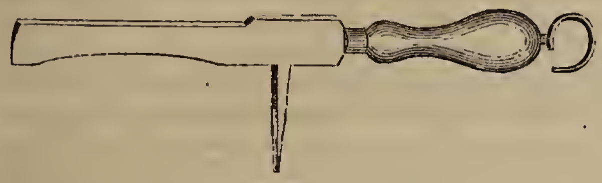
Now for the result. In examining them at different periods during the season, they kept larger than the set potatoes, and they were not put out for three weeks after the others. However, this is easily accounted for, as of course after those sprouts were removed from the tuber and covered with mould, they commenced making roots. As to the number of tubers to each stem, they were nearly double what the cut potatoes were. This increase of yield is of course attributable to the greater number of roots, and they lay from the bottom of the drill to the surface. I will also state that our largest potatoes were of those that were *sprout-planted*. Further, that when we wanted to show or send away extra large potatoes, we took them from the sprout-planted. This is also known, as the persons to whom they were given, accompanied me to dig them; and they have gone round with me trying all the other potatoes, and acknowledged that those were the largest and a great many more of them to each stem. None could conceive how they were grown; all that could be seen was the original sprout, which turns almost as hard as locust, and from which no roots or stems grow but the one, no matter how long it may be; it looks as if it had been grafted, the growing stem to this hard sprout.

This experiment was not confined to one variety, as we had a great many sorts. We tried it on all of them with the same result. They flowered and had apples on same as sets. I cannot give the yield, as they were tried so much during the season, and so many taken off, that we could not ascertain the quantity.

The advantage of this system can be at once seen through. You can raise better potatoes without using your tubers, as of course every eye will produce a sprout, without injury to them, and some of them you can take two sets of sprouts off. If you have a large quantity, and save all your sprouts, you will have more than sufficient to plant. If you are not ready to plant them when taken off, you can lay them one side and throw a little earth over them, just sufficient to cover, when they will commence growing, which of course is equal to planting. You also save time in not having to cut your potatoes, which, when there is a large quantity to be planted, is no inconsiderable item. It takes no more time to drop those in the drill than it does sets—takes no more covering, yields better, and the most material point of any is, your crop ripens a great deal sooner; and if early ripening will save you from the potato disease, (which I doubt,) you accomplish it.

For early use, a few tubers may be kept in a warm cellar, and as they sprout, place them in boxes, and as they advance in growth, (after leafing,) keep covering with mould, as I stated in a former article on forcing potatoes. I cut some potatoes some time since, removing sprouts and placing as above; they were in leaf and over ground before the cut sets had broken at the eye, and all placed in one temperature.

The above plan, of course, will not at present be practiced. Some may doubt its working, but any person giving the potato and its habits a few moments thought, will at once see that it is correct; and all I wonder at is, that it has not been practiced or brought to notice before this. All can try it on a small scale, and prove for themselvas. In early planting, when the ground is wet and turns cakey, of course it will not do to bury those sprouts when in leaf, as it would bake and not let them through; in that case, let the leaves be on the surface. All that are skeptical, let them for the present keep the tops to the surface. After once trying it, they will adopt the whole of the system. GERALD HOWATT. *Nanticoke, Luzerne Co., Pa.*



Grafting Knife.

MESSRS. EDITORS—I send you a rude draft of a good grafting-knife and chisel. Those who have used them, say that the advantage of this form is in having the instrument *balance* when the wedge is in the stock, so that it does not fall out. The hook is for hanging on a limb. D. A. A. N.

Shearing Red Cedar Hedges.

EDS. CO GENT.—Be pleased to give directions for shearing a red cedar hedge, now six years planted, six feet high, and of dense growth, though never yet pruned. When will be the best time to prune, and what the most ornamental form to give the hedge, which stands on a terrace between my house and the village street? A. L. *Waverly, Pa.*

We would not recommend *shearing* a red cedar hedge, but simply shortening back the prominent shoots. Shearing, by cutting off all the shoots alike, produces a close growth at the surface, which shades the center, and makes bare stems. This is one reason why evenly sheared red cedar hedges do not look well. This remark does not apply to all evergreens—the hemlock, for instance, may be sheared closely, and retain dense foliage throughout.

The best time to prune evergreens is in summer, but they may be pruned very lightly now—the work should not be severely done at any time. In the treatment as applied to the red cedar, be careful to *thin back*, rather than merely to cut off the shoots, without regard to the interior. The accompanying figures show the difference between the effect of the three different modes. Fig. 1 is a sheared tree, dense at the exterior and bare within. Fig. 2 is thinned back, admitting the light within, at the same time that it enables the operator to give any desired form or size to a tree, by gradual and successive excisions, and it does not exclude light from the interior. A very simple and good rule for thinning back, is to take off the prominent shoots *at a branch*, by cutting away clean the larger of the two. For instance, the branch, fig. 3, may be shortened back at the fork *a*, or more slightly at *b*

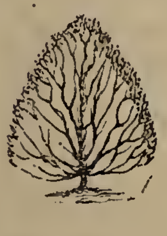


Fig. 1.

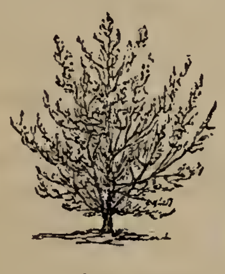


Fig. 2.

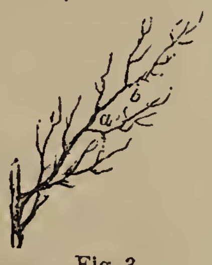


Fig. 3.

FRENCH HONEY.—One pound of white sugar; six eggs, leaving out the whites of two; the juice of three or four lemons, and the grated rind of two, and a quarter of a pound of butter. Stir over a slow fire until it is about the consistency of honey.—*Germantown Telegraph.*

Culture of Millet.

EDITORS CO. GENT.—There was much said a year ago or more, about the Hungarian grass, as yielding much valuable feed for stock. The seed in this vicinity was held at from four to six dollars per bushel. One of my neighbors had grown a crop the year before of the German millet, and pronounced it to be a paying crop, and offered to sell seed at one dollar per bushel. About the first of May I plowed a twenty-acre field, intending to plant it all with corn, but afterwards concluded to sow half the field with German millet seed. On the 10th June bought five and a half bushels of seed. By this time the heavy rains had beat down the ground, and run it together like a mortar bed, and the weeds, where the water did not stand all the time, had got a fine start. Ground too wet to plow again. I spread the seed, and *tried* to harrow thoroughly.

Bad as the season was, I got a paying crop, though most of it grew on less than half the ground sown—the remainder drowned out. I mowed it with a machine when the straw was a little yellow near the head, and the head had changed from a green to a yellow hue, and treated it in every way the same as I do hay. I harvested twenty-one loads and stacked it.

From what I had seen and heard of the Hungarian grass, as being excellent for dairying purposes, I concluded to keep my millet as it is called, until my cows commenced dropping their calves in the spring. About a month ago commenced to feed it. Previous to this I had fed timothy and clover about equal parts, over a month, and from ten to twenty ears of corn to each cow daily. On commencing with the millet, shut the door to the corn crib. My cows are now doing better with the millet alone, than when fed with tame hay and the corn, and making a superior article of butter.

I can see no difference between the Hungarian grass and German millet in regard to the shape of the seed, growth of the straw, or time of ripening—only that the millet has a partially flat head, and the grass, as it is termed by some, has a round head. I have carefully examined the two articles, and come to the conclusion that there is as much difference between them as there is in tweedle-dee and tweedle-dum. That the two grasses are in fact one and the same thing, varying only in the shape of the head, as different varieties of wheat vary. There are many names for wheat, but it is wheat after all. Now whether this grass should be called Hungarian grass, German millet, or Golden leaf, others may decide. *I shall call it good feed for cattle and horses.* C. G. TAYLOR. *Rock-Island Co., Illinois, April* 15, 1859.

Culture of Vetches.

EDS. CO. GENT.—Having seen an article in your paper some time ago, in reference to "Vetches," and having been asked by several agriculturists if vetches are as profitable in this country as in England, I have pleasure in informing you, for the benefit of my fellow agriculturists, that two years ago I imported a small quantity for trial, and I have pleasure in stating that the experiment has been far beyond my most sanguine expectations. I have tried it on all kinds of land, and it has done well on each, but I consider high land the best. Have sown it on a piece of rocky land, where there was not over four inches of soil, and the crop was abundant. I have mowed it three times in one season (upon common clay land,) for my horses. I have also cut it once for feed, and left the second growth for seed, which returned 20 bushels per acre.

I should also inform you that my cattle have been fed upon the vetch straw this winter, and I consider it much superior to feed with than any other kind of straw. A. WOOLFORD. *Lyn, Canada West.*

Thoughts on Farm Economy.

A cardinal virtue lies in the proper practice of economy. But this practice does not consist with mere stinting and saving—it requires wide and far-reaching views, and a generous and self-reliant spirit, to decide practical questions upon that just basis which secures the greatest measure of success. Thus there is an Economy of the Farm which only the judicious and thoughtful take into account, and which the wisest will not claim to fully comprehend. From the nature of the farmer's calling, with the wide and ever-varying range of influences acting upon it, the best instructed must necessarily remain in the dark upon many subjects which derange his plans and hinder his success.

That light and knowledge, having an important bearing on the true economy of Farming, still remains very generally unused, cannot be denied. We have thought, therefore, that it could not fail to benefit our readers to recall their attention briefly, to some thoughts on the methods of action by which progress is made and improvement accomplished, in the business of agriculture.

We have been economical in expending labor, and lavish in our outlay for land. True economy would indicate the contrary course as the proper one. Thorough and faithful work does not require a large area to exert itself upon—it glories in raising ninety bushels of corn upon one acre rather than on three, in its forty bushels of wheat rather than ten on another acre, and so of all its crops. It gives *much labor*—all, in fact, that is required to the best tillage and culture—on *all the land* from which it expects a harvest. It leaves no fertile farm a few inches below its own, all untilled and unemployed, but uses the soil *as far down* as the plants care to send their roots after supplies of food and moisture. It thus saves in the cost of the land, in taxes, in fencing, etc., and something in the labor of cultivation, and still produces far more profitable returns than the contrary course. The truth needs urging again and again, that it is better to economize in land than in labor—and many a farmer, if he would sell half his land, and put his whole force and capital into the cultivation of the remainder, would make money much faster than he now does.

True economy remembers that "the farmer's study is not to avoid labor, but to *make labor pay well;* and nothing is better established than that the labor of *saving manure*—of increasing its quantity and improving its quality—is the *most profitable* he can perform or employ." He believes this, because he does not expect growth without food, or reaping without sowing. Hence manure to keep up and add to the productive power of the soil, is constantly supplied, and thoughtful care in this direction is ever characteristic of the farmer who succeeds. Read the reports of premium farms, of large crops, and of profitable experiments in farming; and high manuring—feeding the land that it may produce abundantly—ever seems the key and the explanation of their success. A judicious expenditure in the collection, preservation, and application of manure, is always a paying investment And there are a thousand sources of fertility now neglected, which it is the province of farm economy to discover and secure. Let us give greater thought to this. We must feed, we again declare, if we expect growth from the soil—and the more generous the farmer, the greater his reward.

A mere glance at first cost cannot decide in many questions of true farm economy. In farm stock, for instance, it costs little more to raise, to any given age, a good animal than a bad one, while the former may be ten times as profitable as the latter. The good may cost more at first, but they are almost invariably valuable—while the cheaper are very often very poor to keep, and extremely hard to dispose of in market. The best breeds of animals—the best kinds of grain and roots—the best farm implements—the best varieties of fruit—and the best method of culture and disposal of crops—all these are earnestly sought by the truly economical cultivator of the soil. The subject is a very suggestive one, but the reader can take it up for himself, and follow it out practically in his own operations. We venture to assure him it will not be a losing business, even under any seeming failure, if it incites him to a better knowledge of the Economy of the Farm.

Clearing and Improving Marshes.

The subject of reclaiming swamps by surface and underdraining, has recently been alluded to in our columns, and we now propose to offer a few hints on the best method of clearing bogs and marshes, and of bringing the same into a permanently productive state. In most parts of the country such land is to be found in considerable quantities; hence we need no excuse for bringing the subject repeatedly before our readers.

Some few years since, an eastern Ag. Society offered several premiums, extending through a course of years, for experiments in clearing and improving marshes, and afterwards reported at some length thereon. It is interesting as showing the cost of bringing boggy marshes into cultivation, and also as presenting the views of practical and well informed men on the best means of accomplishing the same.

As to *clearing*, after a careful examination for several successive seasons, of the half-score of entries of lands, the committee came to the conclusion that the most effectual and thorough process on very wet soils, with a vegetation of small bushes and coarse grasses, was,

1st. To thoroughly drain the land, as far as it could be done by frequent ditches; and

2d. To float or cut off the whole surface of the ground, and piling it in winrows, let it dry, and then burn the whole to ashes.

This method, taking all things into account, they believed to be more economical than that generally practiced, of cutting off the bogs and brush, and then subduing the coarse vegetation by frequent plowings and harrowings. It was found exceedingly difficult to reclaim the soil from its original products by the latter process. By paring and burning, on the contrary, the coarser materials of the land were at once reduced by fire, and afforded a valuable and much needed amendment, in their abundant ashes. The surface, with slightly plowing or thoroughly harrowing, was much earlier prepared for a crop than by the other method, gaining one or two years out of three or four, in the use and production of the land, over that of subduing by the plow.

In a number of examples given, the *cost* of clearing and thoroughly subduing by this process was about $20 per acre. The crops for three years paid all expenses and more, and the land would remain equally productive for a long time, with proper treatment.

If a marsh has much depth of muck and cannot be drained *thoroughly*, we find that after a few years it will settle down nearer the water line, and in the moister spots wild grasses will displace the cultivated ones. If an outlet can be had, the most efficient remedy will be to deepen the drains, plow up and reseed to grass, and if at the same time, a top-dressing of sandy loam be applied, the results will be more satisfactory. The grass will have a better character than on muck alone, and will be less likely to become "run out" by coarser herbage.

No doubt many of our farming readers have had experience in clearing marshes, the relation of which would encourage others to engage in this work of improvement. We hope that whenever their leisure allows, they will favor us with articles on this and other subjects of interest.

Market Day—North Andover, Mass.

Having given some account of the first Market Day held in Essex county under the auspices of the County Agricultural Society, it may not be wholly uninteresting to the readers of the Country Gentleman and Cultivator to be furnished with a brief account of the second, which was celebrated on Tuesday, the 17th inst. The place of meeting was well chosen, the show of stock, produce, and farm implements and machines good, and the attendance of farmers quite large. The sales by auction and otherwise, as numerous as could have been reasonably expected. The results of the day, like those at South Danvers a fortnight since, are decidedly favorable, and therefore encouraging to the friends of this new enterprise.

As the reader is less interested in the details of a local matter of this kind than in the system and its prospective and general utility, it is proposed to present some of the benefits to be derived from the inauguration of market days by farmers. Mr. R. S. FAY, Secretary of the old "Massachusetts Society for the Promotion of Agriculture," is really entitled to the honor of introducing this new order of things. Having lived in England, where Market Fairs have been in successful operation for many years, and observing their utility, he was led to advocate their trial here,—maintaining that the art of selling well is quite as essential to ultimate success in farming, as that of producing well; also, that time is money, much of which is wasted in prospecting for buying and selling under the old way of doing this business. To economize time, he proposes that market days shall be holden over the State under the direction of the County Agricultural Societies, so instituted as to occur annually. This being done, a person desirous of buying, selling or exchanging animals, farm produce, &c., instead of spending several days in riding about as now done, may resort to the place where a market day is holden and there do his business.

With regard to domesticated animals, they will be on exhibition. Concerning the cereals, grains, tubers, roots, fruits, &c., they may be sold by samples. For example, a farmer has wheat, potatoes, onions, apples, or other products for sale, all he need do is to carry a sample or samples, sell what he desires, and deliver whenever the party purchasing orders it. This was done at South Danvers. A man sold a hundred bushels of potatoes for seed, from a sample on exhibition.

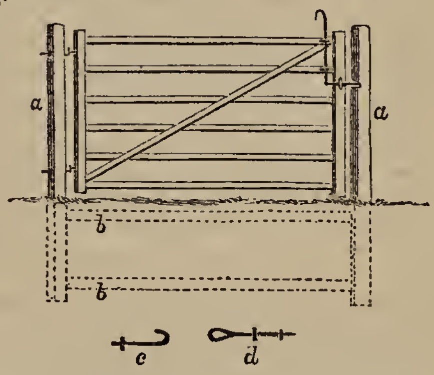
Another advantage is, that farmers are brought together more frequently, "and as iron sharpeneth iron, so a man sharpeneth the countenance of his friend," says an old oriental writer. Farmers cannot thus meet and traffic, without returning to their homes and labor wiser and better farmers. Less time is really consumed, and more business accomplished, and better done too.

It is hoped therefore, that the farmers in other States will give this subject its merited consideration and a fair trial. Something similar is already in operation in Kentucky, and has been for several years. It would be interesting to the readers of the Country Gentleman, if some one acquainted with the working of market days in that State, would give an account of them. What has been, and what is doing, are quite as important to the inquirer after knowledge, as to be told what should be done. The past, the present, and the future, are all important elements in what regards permanent improvement, whether in things abstract or concrete, subjective or objective.

The weather continues cool,—farmers busy putting in the seed, with a prospect of a ready market and remunerative prices for all they can produce. COLUMELLA.

Farm Gates.

Your correspondent, W. C. PINKHAM, gives a description of a farm gate, which is in some respects good. I herewith give you a sketch of my mode of putting in gate posts and hanging gates, which prevents their sagging.



a a are the gate posts of any desired size, with (*b b*) transverse pieces mortised into them, one at the surface of the ground, the other at the base of the posts, or within a few inches of it. This makes it impossible for the posts to approach or separate from each other. It is requisite, instead of post holes, to excavate a trench two and a-half feet deep, and a foot or more wide, as may be necessary, and the length of the frame, to set it in.

I have not specified any particular size for posts, as that depends upon the size of gate, materials used, taste of maker, &c. The cross pieces may be as wide, but only half the thickness of the posts.

The gate made as represented—end pieces, and top and bottom pieces of 3 by 4 scantling—cross bars and stay pieces of inch plank, 4 inches wide. Hinges made as represented by *c*, for the post, and *d* for gate, each bolt having a nut on it to screw it up tight.

A common iron latch, with handle reaching above the gate, and a catch placed in a notch cut out of the gate post, allows the gate to swing open on either side. The arrangement is substantial, that in my opinion being one of the principal requisites in farm gates. The gate is not heavy and swings easily. H. HINKLEY. *Prairie Cottage, Ill.*

Clean Milking.

It is a matter of great importance that the milk should all be drawn from the cow's udder. Careful experiments made in England show, according to a report recently published, that "the quantity of cream obtained from the last drawn cup, from most cows, exceeds that of the first in a proportion of twelve to one." Thus a person who carelessly leaves but a teacup full of milk undrawn, loses in reality about as much cream as would be afforded by four or six pints at the beginning; and loses, too, that part of the cream which gives the richness and high flavor to the butter.

How Not to Do It.

Messrs. Editors—I was very much impressed with some truths contained in an editorial article of the Country Gentleman of March 10, on the discouragements incidental to the occupation of a farmer. Your suggestion, as to the space improperly farmed over, is the very pith and marrow of the whole affair. I am perfectly convinced, from a long course of observation and experience, that it is the one great cause of the deterioration of land, and of the unprofitable results of years of hard labor. It is also one of the great causes which disgust our young men with the life of a farmer. How common it is to hear it said that farming does not pay, and that capital invested in land never yields more than 3 or 4 per cent. I will, however, at some future time, endeavor to expose the fallacy of that assertion. But that farms do not yield what they ought to, and that farmers do not realize as much as I think they should, is an incontestible fact. To see a thin, sickly looking crop of grain, as far as the eye can reach, a large lot of little puny cornstalks, and a field of potatoes whose tops are struggling with the giant weeds, and from whose hills are dug out little pebble stones and pigeon's eggs, is enough to dishearten any one. The grain must be harvested, every hill of corn and potatoes must receive individual attention. The whole of this vast territory must be gone over again and again. The entire year is consumed in producing some large crops, superficially considered, and when the farmer has disposed of all his surplus, and paid his honest debts, how much has he left for his next year's operations? How can he procure some fruit trees, some labor-saving machines, some little luxuries in the way of berries, &c., about his house and garden? I have been much on the continent of Europe, and in England, and it is absolutely astonishing to observe the capacity of an acre of ground, if properly and carefully cultivated. Every foot of ground is made available. Look at our market gardens near our large cities, and see what wonders they produce. Will any one pretend that the land is better? It is labor and capital invested in a few acres, prudently managed, and diligently cultivated. Many farmers will at once conclude that they have no such advantages of position. But in these days of rapid communication with our large cities, there are few farmers but have great facilities, if they only choose to avail themselves of them.

We cannot, in this section of the country, compete with western farmers in raising grain. Their lands produce almost spontaneously; their first cost was but a trifle; their facilities for sending produce to our seaboard have been so multiplied, that they have an incalculable advantage over us here. I am convinced that farmers in this section must change their whole system—not to neglect their grain crops, but to pay more attention to other things. We must here take advantage of our proximity to the large cities, and must endeavor to administer to their necessities and luxuries—the latter particularly. Who that will read this article, cannot recall to mind some friend or neighbor who has cultivated a few acres very highly, raising fruit, berries, onions, &c., and has been doing a much larger and more lucrative business than many farmers with ten times his quantity of land. I could enumerate several in my own immediate neighborhood, who are only cultivating 28 to 30 acres, and who I am confident, are doing a larger business and making more money than any 200 acre farmer in the county. It seems to be peculiar only to us agriculturists, to lay out more work for the year than we can possibly accomplish. The whole farm must be worked over—that large lot must be planted, another sowed, and all these, with the constant interruption of fence making, and those hundred little indispensable jobs which are always so unpleasant, and so absurdly introducing themselves to your notice, that we never do really well what we have to do. The corn must be run through with great rapidity, because the potatoes are suffering; the potatoes must be scraped over in 2.40, because the rascally weeds are choking those young onions to death; so that something is always suffering from want of attention, and so it goes until the frost brings us up with the work half finished. Exhausted, we take our pipe and contemplate the past laborious season, and find how little absolutely has been accomplished. I am determined to remedy this, and perhaps at some future time I may tell your readers how I propose "to do it." In the first place let us exhaust the present subject of "How not to do it." C. Pumpkin. *Columbia Co., N. Y.*

Culture of Millet for Hay and Seed.

Eds. Co. Gent.—In your paper of April 14th, I see a communication from A. B. Dickinson, on Hungarian Grass and Millet, in all of which, except as regards the value of millet hay, I fully concur. The value of millet hay depends very much on soil, cultivation, and time of harvesting. Whether it is worth more than other hay, every one can judge for himself. Whoever wishes to raise it, will feel himself at least fully remunerated, if he will follow the following directions:

For Hay.—Take a good piece of corn land, unmanured—break it thoroughly, and pulverize the soil very finely. Sow two bushels of good seed per acre, and cover with a very light brush. Cut it just as it begins to ripen — leave in winrows one day—then haul to the barn.

For Seed.—Take a piece of very rich land—break it well—pulverize finely—lay it off one way three and a-half feet wide with shallow furrows—drop the seed in the rows as thin as possible—cover by running a light brush crosswise of the furrows. When it comes up, thin out to one stalk for about every two inches—cultivate same as corn. When ripe, cut the heads off, and clean the same as wheat. For hay, sow first of June or last of May. For seed, plant first of May. B. J. T. *Pelham, Tenn.*

Causes of Fertility of the Soil.

If the sand soil in Ohio is finer than the soil in the Eastern States, so it gives a greater area to the air and water to act upon it for dissolving, and so much more the mineral elements will be ready for the nourishment of the plants. Lies the Ohio soil flatter or is it moister, so will this dissolving act be increased a great deal, and the plants have continual nourishment. The finer sand excludes the air more than the coarser, and prevents the dryness better, and great dryness stops the chemical activity of the soil too much.

The most sterile sand gives the best meadow by abundant and judicious irrigation. Germany can show a hundred thousand acres of their irrigated meadows, where a few years ago the soil blew around with the winds. E. S. *High Place, Ill.*

Cure for Scratches.

H. Payne, of Lockport, communicates the following remedy for scratches in horses, which we have seen tried with good effect:

"When the horse comes in at night, his legs should be washed clean and rubbed as dry as may be; then apply good vinegar, rubbing it well to the skin. Two applications a day are sufficient. I have always found it a sure preventive and a certain cure. If the legs have become cracked and sore, apply the vinegar freely, and add a piece of copperas the size of a common hickory nut, to a quart of vinegar."

Indian Corn—"Mixed Sorts."

There are a score or more of distinct and valuable varieties of Indian corn, all probably originating in the Wild or Rocky Mountain corn, in which each kernel has a husk or envelope answering to the chaff of wheat, etc. These varieties intermix very readily—it is rare that we find them perfectly pure, and often these mixtures acquire a name and fame of their own. At the last State Fair, in a discussion on corn culture, several of the speakers in answer to the question, "What kind do you cultivate?" replied, "I have a mixed sort;" and it seemed to be the general opinion among those present at the meeting, that these "mixed sorts" gave a better yield than any variety kept pure. We referred to the subject at the time, (Co. Gent., Oct. 28, 1858,) hoping to call out further information on the subject from those who had experimented in the matter. No response having been elicited, we now repeat the invitation, and add what we have been able to glean from different sources on the same.

One of the speakers at the discussion above referred to, preferred to mix his seed; and had planted a mixture of the Dutton, White Flint, Eight-rowed Yellow, and Red Streak. His crops were large and sound.

We have seen a fine sample of corn—a mixture of the White Flint and large Eight-rowed Yellow; the ears were about fourteen inches long, and the kernels of extra size. We are inclined to think that the eight-rowed sorts will intermix most kindly, and that we may hasten the period of ripening by planting a slightly earlier variety with the later ones.

Some ten years ago, a Vermont farmer planted the Eight-rowed Yellow, Eight-rowed White, and Red Blaze, (also eight-rowed,) side by side. From the ears in which the kinds were most evenly mixed, he planted for his next year's crop, and the third year, of the seed produced, grew over 114 bushels of shelled corn per acre. The corn at this time presented but few white kernels, but was blazed at the top—the ears long, with small cob. Another farmer mixed the Eight-rowed Yellow and the Brown corn, (King Philip,) producing an excellent crop—the ears differing in appearance somewhat from either variety.

In a former volume of the Cultivator, (1848, p. 252,) a Rhode Island farmer states that he cultivated for five years the "White Cap corn," of medium size, and deep plowing and manuring caused it to grow larger and later. He also tried the "Yellow Cap corn," but found the White to have less weight of cob and more fodder than the Yellow. He then tried a mixture of the two, equal parts, and found the result in its favor. The product was heavier than either White or Yellow, by three-fourths of a pound per bushel.

We mean to try a few experiments with the "mixed sorts" the present year—but have heretofore sought to keep them as distinct as possible. Our trials of different kinds have been for the most part, for the purpose of adapting the variety to the soil and time of planting, taking also the character of the soil for fertility into consideration.

* * *

To Make Cows "Give Down."—I noticed in your March number, a way to make cows give down milk when they hold it up. I think I can tell you a better one. It is to put a bag of meal, or any other weight, on her back. This is almost always a sure way.
PORTSMOUTH.

The Verbena.

There is no need of saying anything in praise of this most beautiful flower. Everybody grows it, and admires it. It should be grown in masses.

As soon as all danger from frost is past they may be set out. In selecting plants, it is preferable to choose those which are robust, even though they may be small, in preference to larger, spindling ones. In planting them, leave more room for the scarlet varieties to spread than the other colors, as they are more vigorous in general.

The habit of the Verbena is naturally trailing, taking root wherever the stems touch the ground. It is well to keep the stems lying on the ground by means of small wooden pegs. These may be expeditiously made by sawing a shingle into lengths of about four inches, and splitting these into pieces a little larger than a common match. Run one of these obliquely into the ground on each side of the stem near a joint, so that the ends shall just meet over the stem, which is thus confined securely.

There is hardly a flower in cultivation which blooms for so great a length of time. Beginning in the open air in May, they continue to send out new shoots which bloom profusely until severe frosts. They may be raised from seed, but in order to have an early bloom, they should be started in a hot-bed. It is better to procure the plants from a green-house, when practicable, than to raise them yourself.

The Verbena is a difficult plant to keep in the house in winter. It is hardly worth while to attempt it, as the plants may be bought so cheaply in the spring that it does not *pay* for the trouble. G. B. H.

* * *

MESSRS. EDITORS — I will give you a few receipes, which I can testify as being No. 1, having repeatedly tried them, and not in one instance found an improvement necessary. M. H. K.

Wine Jelly.

One pint of cold water to be poured on one paper of gelatine. Let it stand an hour—then add one and a quarter pounds of white sugar—the rind of one lemon, and the juice of three—one pint of wine, (any kind will answer)—one quart of boiling water. Strain it, and set it away to cool and harden.

Steamed Flour Pudding.

One pint of flour--one pint of milk, and four eggs, and a little salt. Steam it one and a half hours.

Indian Mush Cakes.

Take one quart of water, and when boiling thicken it with meal. Have it about as thick as you would mush. When a little cool, add two table spoonfuls of melted butter, two of yeast, and enough flour to make it about as stiff as bread dough. Let it stand over night. In the morning, add enough flour to roll out in little cakes, and bake on the griddle.

Green Tomatoes.

To one gallon of tomatoes, chopped fine and pressed as dry as possible, add three red peppers and three onions, also chopped—one pint of grated horse radish—a half a pint of black mustard seed—two table spoonfuls of ground cloves, one of ground alspice, and one of black pepper. Put in a jar and cover with cold vinegar. You can leave out the onions if you choose. I do, if I expect to see any of my friends during the year.

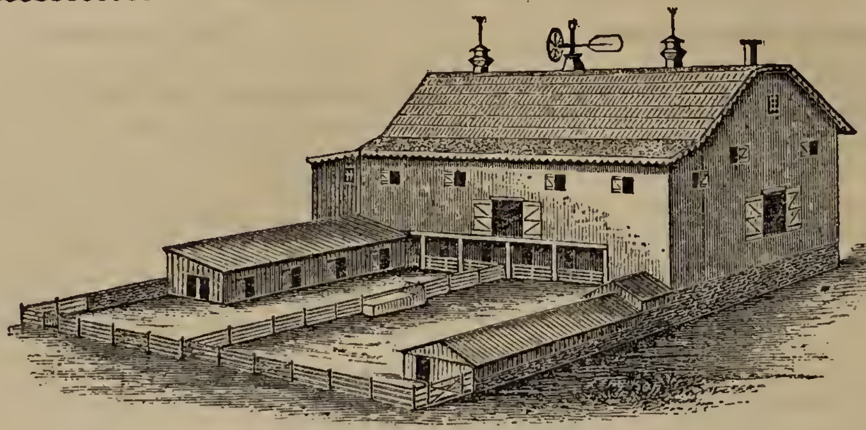
* * *

To Destroy Bee-Worms.

Take boards or shingles, and cut games or notches crosswise, nearly a quarter of an inch wide and deep; then raise your hives on blocks half an inch, and lay your shingles on each side of the hive, notches down. The worms will hide from the bees in the notches. Take up the shingles every morning and cut the worms with a knife. P. L. EVANS. *Richburg, Allegany Co., N. Y.*

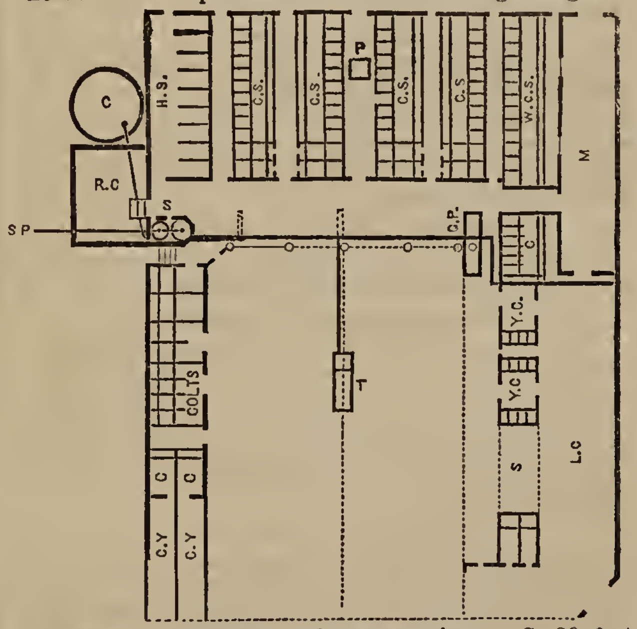
* * *

Red clover is generally sown in England with barley, without mixture of other grass.



Geo. G. Lobdell's Barn, Wilmington, Delaware.

This large barn is remarkable for its *completeness.* The proprietor would have made it a "double-deck barn," had the ground admitted. The perspective view shows its general appearance and structure. It is 120 feet long and 48 feet wide. The wing in front is of the same length, and 16 feet wide. The stone wall for the basement is 10 feet high, and 22 inches thick. The height from the threshing-floor to eaves is 18 feet. The flat part of the roof is gravelled. The barn-yard is paved with smooth round stone, and cleaned up every week, or oftener if necessary, and the manure put in the manure cellar. A carriage-house and work-shop is attached to the further end, 18 by 24 feet, two stories. The lower 9 feet, and upper 7 feet. The upper is used for a store-room and tool-house. Ventilators, 5 feet square at base, are seen on the top, and a wind-mill with 12-feet wheel, six sails, self-governor. At the nearer end is a pedestal for a wind-mill to grind grain.



The Plan represents the water cistern, C, 20 feet diameter, 8 feet deep; it receives all the rain water from the barn roof, and the surplus from the house and shed roofs, and supplies water for stock. R. C. is the root cellar, 16 by 22 feet, 9-feet story, underground H. S. are horse stalls, 5 feet wide, 14 feet long, including passage way. There are ventilators at head of stalls, horizontal; and in front of them are entries, 5½ feet wide. The cow stables are marked C. S., and the mangers in the cow stalls are 3 feet deep, 3½ feet wide—some 4 feet wide; the stalls 6 feet long from liquor trough to mangers; liquor conductors behind them, convey all the liquid manure from the stalls to manure cellar, and are 1 foot wide.

P. are the wind mill and hand pumps, placed in the well, and both, if desired, will force the water to the house, in the attic of which is a tank containing 1300 gallons. The surplus, if any, runs back to the cistern, C.

W. C. S. Working cattle stalls, 4 feet wide by 14 feet long, including passage-way.

C. Stalls for calves that are weaned.

S. Enclosed shed, 13 by 27 feet.

L. C. Shed for loose cattle, 21 by 76 feet.

M. Manure cellar, 18 by 70 feet, and 5 feet deep below the surface, and 10 feet above, enclosed by a wall (22 inches) of stone laid in hydraulic cement; the bottom is laid with cinders, which are grouted with, and have a coat of hydraulic cement on top—being perfectly water-tight, and having a floor which is even with the ground on the outside.

All the manure from the stalls, or that drops in the yard, is regularly taken to the manure cellar, the horse and cow manure being mixed well together. Then, beginning at one or the other end of the cellar, the manure is composted and wet with the liquor which is in the bottom of the cellar, there being a floor on which the solid manure is placed; each separate layer of manure having ground plaster sprinkled on it, and on the top layer a quantity of clay soil or muck. When one end is full, we commence at the other end and treat it in the same way, leaving the middle free to work in. Before the second end is filled to the middle, the first compost is fit to haul out, being perfectly rotten.

Y. C. Stalls for young cattle.

C. P. Calf pen for sucking calves.

C. Y. Yards for young weaned calves. An iron pipe runs across the yard under ground, into which the conductors or spouts from the barn, sheds, &c., convey the water, and connect with the cistern, C, and a lead pipe leads from this pipe to the water-trough, T, which is made of brick, laid in hydraulic cement, having in one end a division, separating the part in which the lead pipe is introduced. Attached to the lead pipe is a cock, operated on by a copper ball or float, which causes the cock to open or close as the water lowers or raises in the trough. The connection between the two parts of the trough is at the bottom of the trough. Around the outside of the trough are placed boards, leaving about 4 inches space, which is filled with charcoal or sawdust. The end in which the water is introduced, is enclosed in a wooden box, made higher than the trough, with double lids, one above the other, with about 2 feet space between, which affords access to the cock, and prevents the water from flowing. The trough being in a warm situation on the south side of the barn, does not freeze readily. When the weather is very severe, there are lids to cover over the parts to which the cattle have access, and at night straw is put on in addition.

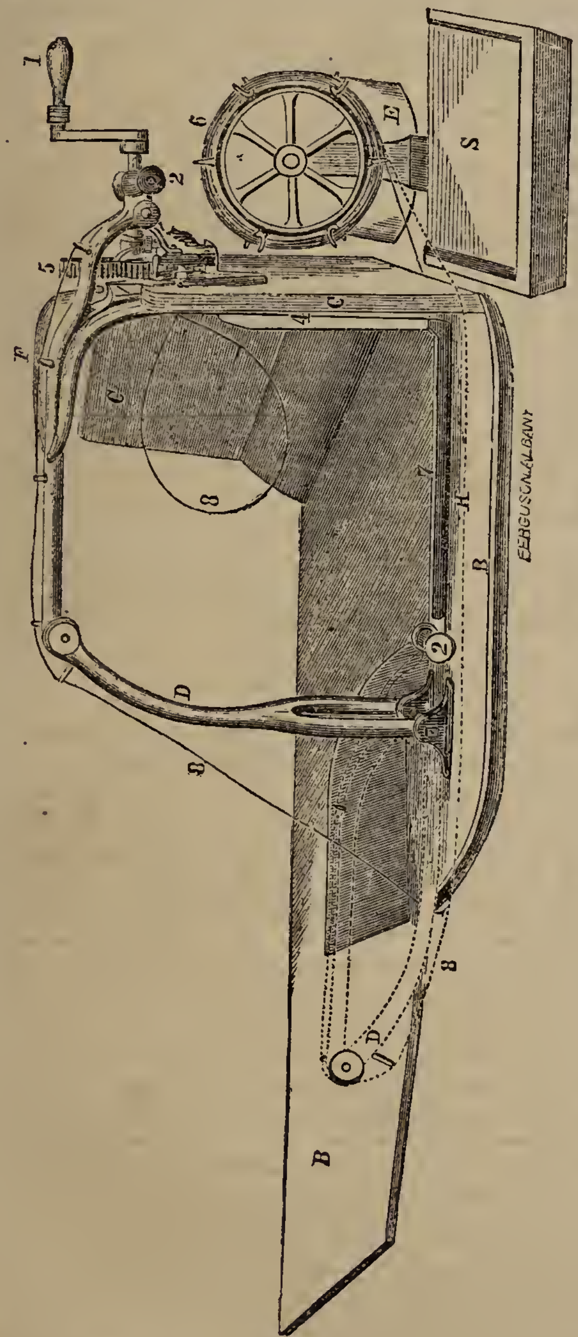
S. are tubs, holding 50 bushels each, in which food of any kind is steamed. The steam is introduced at the center, through a pipe made like a funnel—the large part being put down, and not extending to the bottom of the tub by 2 inches. Lids are fitted to the tubs for the purpose of retaining the steam.

S. P. is the steam pipe which conducts the steam from the boiler. This boiler is in the cellar of the dwelling-house occupied by Mr. L., and furnishes steam to heat the same.

Sherwood's Grain Binder.

The reaping machine, as now constructed and thoroughly proved, accomplishes a most important purpose by applying horse labor at a critical period with the farmer. Its economy does not depend so much on its greater cheapness, as on the *command* it gives the farmer of his operations. He sweeps over a ten acre field in a single day, and escapes perhaps a long storm, and avoids with certainty the shelling and scattering of the grain incident to deferred harvesting.

But the mere act of *cutting* the grain accomplishes only a part of the labor. Raking and binding still remains as a heavy task. Self-raking machines, if perfect, would save but one additional hand; but four or five binders are required besides, to follow a good machine. Even the perfection of self-rakers remains a problem not yet satisfactorily solved, and some which were highly recommended at first, have fallen into disuse.



We know of but one attempt to construct a binding machine that promises to succeed. This is the invention of Allen Sherwood of Auburn, N. Y. We noticed this machine briefly last autumn, in our account of the implements at the Syracuse State Fair. We have recently given it a careful examination, as much improved by the inventor since that time. The only satisfactory proof of its value must be its thorough and extensive trial in the harvest field; and for this purpose the manufacturers are making about twenty-five machines for experimenting during the ensuing harvest, deferring until after that period, the offer of any for sale. The above figure is a correct representation of the binder. It may be attached to any reaping machine, its whole weight, wood and iron, being about 60 pounds. The price will probably be $25. Its leading peculiarity is the use of *annealed wire* for bands. This is first wound on the reel E, from which it passes in uncoiling across the face of the platform H, and then back by the movable elbow D, to F, forming, when drawn up, the loop 8. This loop is quickly and easily made by a single movement of the hand, as soon as the gavel is thrown upon it by the raker. One revolution of the winch 1, twists the wire together and cuts it off, completing the sheaf, which drops off behind. It will be perceived that three hands are thus required to man each reaper, a driver, raker and binder. An active boy twelve years old, will perform the office of the latter. These three hands, it will be perceived, with the assistance of a good team, will cut, rake and bind, ten acres of grain in a day, provided the machine works well after a full trial. We have little doubt of its ultimate success, although as is always the case, many suggestions for improvement will occur while it is under trial. The wire can be obtained at wholesale for 12½ cents per pound; and we ascertained by weighing the wire required for a single sheaf, that one pound would bind 190 sheaves, or about a pound and a quarter per acre on an average. Wire a little larger is however preferred, costing about 20 cents per acre. This wire cannot be used again for this purpose; but by being tripled and twisted, would make good fence ties, and be useful for other purposes. In many instances, its cost would be saved by avoiding the shelling of the grain from the bands alone; and it would repay many times its cost by the saving of labor.

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Curing Green Corn for Winter Use.

On Top of the Rocky Mountains,
New Mexico, *Feb.* 8, 1859.

Editors Co. Gent.—In your paper of December 30, 1858, is an article headed "Reader will you Write for us?" In that article you enumerate 14 headings for articles on the corn crop. Allow me to add one more, and give you the Navajoe mode of carrying it out, as discovered during the late war. I refer to the "method of curing green corn for winter use." These Indians cure it as follows, and I have seen no better mode.

When the green corn is fit for use, a pit is dug, from two to three feet in diameter at top, and gradually enlarging, is at bottom, say 5 feet down, from 6 to 8 feet in diameter. A large fire is then built near by, on which stones are heated, and when red hot, the stones and live coals are shovelled into the bottom of the pit, and sprinkled over with fine loose dirt. The corn is then thrown in with the husks on, just as it is pulled from the stalk, until the pit is nearly full.

Then comes a thin layer of loose dirt, then hot stones, (enough to close the pit,) and the whole covered with earth, to retain the heat. When the whole cools off, (which takes several days,) the pit is opened and the corn is found to be most delightfully cooked. When cool, the husks are stripped off and the corn dried in the sun—when thoroughly dried, the corn is shelled off easily, and is then packed away in bags for use. This, although the mode adopted by *savages*, cures green corn better than any method I have seen practiced by *civilized* man. If you deem it worthy of insertion in the Country Gentleman, you can insert it; if not, I presume no harm is done by Mountaineer.

Want of System.

Said a gentleman to us not long since, "let me tell you how to accomplish a great deal in one day. In the morning before you go down town, take a slip of paper, and put down in a brief way, all that you wish done; every errand that you have got to make, all businesss that has got to bo transacted. This done and you can proceed. Take it along in regular order; do this; well this is done; the next, that is accomplished; and so on through the list."

This method, for a business man, would, no doubt, be a good one. Farmers cannot so well practice it in their various operations, but the principle is the same. System is what is wanted, and system in the management and work of a farm, is of the greatest importance. The farmer's time is as valuable to him as the professional man's time is to him; it is as important that every operation should be performed in the best manner, and with the utmost despatch; it is as much for the farmer's interest to finish this job immediately, that he may begin another that is pressing upon him, as it is that the merchant should economize *his* timo in tho performance of his various business duties.

Some farmors always manifest system in all they do; every operation, even the most trivial and common place, is executed with regularity, promptness and order. And it is truly surprising to see how much more a man can achieve in the world, and how much more he can perform in a single day, if he goes about his occupation early in the morning and with a clear view of what is before him; everything to be done is marked out in his mind, the work of the day is clear; he takes no useless steps, he does not begin one job and leaving it half performed go about another. He exhibits system, order and precision. We say how much more such a man can accomplish than one who goes about his work with no idea of what he is going to do, nor how he is going to do it. Yet it is not uncommon to see such farmers. They get up in the morning and do not know hardly what it is best to do; don't know what the weather will be through the day; decide to do this, begin, change their mind, and conclude to do something else. So an hour passes by—these golden hours of the morning are very apt to slip away unimproved—and the farmer has decided what to do. He decides to furrow out for corn; gets into the field and finds that one of the traces of the harness is broken and must be mended before it can be used. One goes to the house to fix it, the other with the horse remains idle. Another hour slips away, soon another; not much done, but lo! it is noon! What can such a farmer expect to accomplish? His fences are always down, his cattle are always ranging the highways, his tools are always out of repair, and he is always behind with his work. What is tho reason of all this? when his next door neighbor, with a larger farm, less help, and with easier work does double the amount of labor. Want of system, want of plan, want of a little calculation and forethought.

Men who have achieved the most—who have done the most in this world for the benefit of their fellow-beings—have been men of order and system. Whatever a man's occupation is, he can accomplish but little without a thorough and comprehensive, a complete and practical *system!* And even these small matters in every-day life—those things which take up time and yet don't seem to amount to much—can be so performed as to leave much spare time for more serious and active pursuits. On a farm these little matters are numerous. Now one can tread round all day in a half-bushel basket, and when night comes, nothing can be seen to show that he has accomplished the least amount of good. It is very often said by men who are engaged in farming, "I look rather cluttered up round here; but I intend to take a day by-and-by and clear up." We have heard just such remarks made, and have, in many instances, seen the result of them. They put off the day in which they are to "chore round,"—put it off day after day; little things are to be done; "Well, one of these days,"—thus they accumulate. These little easy matters, become large and important duties. Now let us apply *system.* If one thing wants doing, secure the first half hour of spare time, and *do it.* So with the next, and the next, and so on. Instead of allowing a lot of little jobs to increase until there are enough of them for a day's work, do each one as fast as they want doing. Time will be saved, your premises will look better, and you will feel happior.

True, the farmer cannot—as the merchant can—note down oach item to be done through the day, and in the morning begin and go through the list, performing each job in regular order; but system is the same in every pursuit, and the farmer can apply system to his profession, as much as the lawyer or the merchant can. Now this application of order and system to every operation of the farm, is what we advocate. Now and then we see a farmer who practices this in every job of work. It is natural to him; we see how much better he gets along, and how much more he performs than his neighbor, who has no regularity or system. Why not then, as we see the vast benefit resulting from the manner in which a skillful farmor manages his work, appropriate it ourselves and put those principles into use upon our own farms? Even though it be not so much a thing of nature with us as it is with him, yet the course is one of such immenso advantage, that we should spare no pains to make it the rule and guide of every operation upon our farms. Are we doing this now?

Cultivation of Pea Nuts.

EDS CO. GENT.—Recently on the cars between Wilmington, N C., and Charleston, I heard one man of an intelligent look, ask another "what kind of tree bore the ground pea," (*Arachis tuberosa,*) which is cultivated extensively in the vicinity of Wilmington, there being from one hundred and fifty thousand, to two hundred thousand bushels of pea nuts exported annually from that city. The sandy soils of that section are well adapted to their growth, a loose sand producing greater crops than a rich vegetable mold. They are planted in drills 3 or 4 feet apart. Formerly it was thought necessary to have the blossoms covered in order to produce good yields, but observation has taught that it will cover itself by shooting the fruit portions of its flower into the loose soil. It is a curious provision of nature, a knowledge of which now saves much labor. In the fall a wide scraping plow is run beneath the vines, to the roots of which tho peas adhere. The peas are picked by men, women, and children, from the roots, during the winter, and the vines fed to cattle. About forty bushels to the acre is considered a good yield, the price of which does not vary much from one dollar per bushel in the Wilmington market. The pea nut belongs to the natural order Leguminosæ of Botanists. S. B. BUCKLEY.

Mr. Taber's Cattle Sale.

Messrs. Editors—Mr. Taber's sale has just closed. There was a very fair attendance of persons, and many from abroad. Among those from our own State, were Messrs. Kelly, Thorne, Bathgate, Ketchum, Belden, Gazeley, Olcott, Allen, D B. Haight, Rathbun from Otsego Co.—Mr. Lathrop from South Hadley, and several others from Massachusetts and New-Hampshire. The day was very unfavorable, although the rain very fortunately was suspended during the sale, which commenced about two o'clock, in an open field. The stock was in fair condition, and many very promising animals. The prices, you will perceive, were not large; and perhaps it is safe to say that the prices were in every case, below what such animals would have brought under more favorable circumstances.

I give you the names of purchasers, where announced, in the order of the printed catalogue, although the sale commenced with the cows and heifers, and the last animal sold was the stock bull Highflyer, sired by Duke of Gloster, and a very fine animal. He was the only animal on which a bid was reserved—he was started at $450.

BULLS.

Messenger, 3 years old, Mr. Halleck, Ulster Co.,	$90
Genseric, 1 year old, W. A. White, Dutchess Co.,	76
Hyperion, 1 year old, Mr. Rathbun, Otsego Co.,	91
Buccaneer, 2 years old, Mr. Thirsby,	90
Alaric, 1 year old, D B. Haight, Dutchess Co.,	145
Attila, 1 year old, E. Griffen, Dutchess Co.,	58
*Comptroller, 1 year old, E. K. Taber, Dutchess Co.,	47
Plebeian, 1 year old, V. Halleck, Dutchess Co.,	65
Reefer, 9 mos., Henry Wolf, Dutchess Co.,	45
Highflyer, A. G. Wood, Mass.,	505
Ten Bulls, averaging $121.20,	$1202

COWS AND HEIFERS.

Gem, & calf, 5 yrs., S. N. Buffam, New-Hampshire,	$105
Aurelia, 9 yrs. old, D. B. Holcomb, Mass.,	100
Atalanta, 8 years old, D. B. Holcomb, Mass.,	100
Arezonia, 2 years old, Paoli Lathrop, Mass.,	100
Colona, 1 year old, M. J. Smith,	75
Autumn, 4 years old, R S. Van Wyck	50
Laura 3d, and calf, 8 years old, Paoli Lathrop, Mass.,	140
Lauretta, 5 years old, Mr. White,	111
Lizzy, 4 years old, Judah Swift,	105
Calla, 6 years old, Abram Burton,	83
Jeanett, 5 years old, " "	86
Edith, 3 years old, Samuel Thorne, Thornedale,	100
Zillah, 2 years old, Abram Burton, Dutchess Co.,	100
Ziporah, 1 year old, Haight & Merritt, Dutchess Co.,	65
Zade, 2 years old, Z K. Taber, Dutchess Co.,	80
Aurora, 14 years old, Gilbert Coffin, Dutchess Co.,	71
Luna, 5 years old, Paoli Lathrop, Mass,	190
Dawn, 2 years old, Mr. ——, New-Hampshire,	110
Twilight, 1 yr. old, " " "	75
Starlight, 2 years old, M. J. Smith,	155
Twinkle, 1 year old, Paoli Lathrop, Mass.,	100
Althea, 6 years old, Sylvanus Willis,	220
Cuphea, 3 years old, " "	190
Erica, 2 years old, " "	225
24 Cows and Heifers, averaging $124,	$2736

Dover Plains, May 10.

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A Cure for Scratches.

Messrs. Eds.—Reading on page 236, vol. xiii, no. 15, Mr. Payne's remedy for scratches in horses, induces me to send the following receipt, which I have often seen tried with the most satisfactory results:

Procure some lamp oil, add a little white lead, and mix both together until the oil assumes a light straw color. When the horse comes in at night, his legs should be washed perfectly clean, and rubbed perfectly dry. Then apply the mixture, rubbing it well to the skin. Two or three applications are sufficient to effect a perfect cure, no matter how bad the case may be. James Owen. *Great Barrington, Mass.*

Oxen in Summer.

A tanner near us says he had several hides brought to him the first week in May, taken from working oxen which died in consequence of the extreme warm weather. They could not "stand the heat" under moderate exercise, it was said; if we knew all the circumstances of feed and care, perhaps we could give "the reason why" The proper treatment of working oxen is not as well understood as formerly—less use being made of them by the majority of farmers. We have thought it might be of service to some of your readers, to give the method of management in hot weather, pursued by a Western New-York farmer, as it seems to us particularly judidious.

His oxen are always kept in good condition, and in summer have a good clover pasture. He is careful to start them up at half past four in the morning, that they may go to feeding and fill themselves for their forenoon's work, by the time his chores are done, breakfast eaten, &c. At noon they are not allowed to drink until after feeding some, for the reason that if allowed to drink directly after unyoking, they will fill themselves so full as not to have any appetite for grass. They have two hours to feed in, and then go again to the plow, and are generally turned out about sundown or a little before. Under this treatment, they do not need to stop to rest from the time they commence work until noon or night, and will keep in good order, scarcely seeming to feel the heat

An old New-England farmer learned him that salt was injurious to working oxen; accordingly he never gives it while they are in daily use for work. It causes them to drink heartily, after which they will lie down until the water passes out of the stomach, eating little or nothing by the time you wish to go to work again. Not only that, but drinking so much water and eating so little grass, will be likely to give them the scours, which will certainly weaken and render them less effective. Oxen managed according to this method, will do a great deal of work, and keep in good order, and will bring them into better repute in comparison with horses, for doing the work of the farm. M. *Monroe Co., N. Y.*

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Cooked *vs.* Uncooked Food for Pigs.

Eds. Co. Gent.—Noticing the different statements about the value of cooked or uncooked feed for swine, I give you the result of several trials which I made the last fall, as follows:

Two pigs, selected Sept. 1, 1858, weighed 184 lbs.—fed for 30 days with 264 lbs. ground rye, cooked, and 58 pails sour milk. Pigs gained 93 lbs—cost 4 26-100 cents per lb.

Sept. 1, 1858, selected two pigs—weighing 187 lbs.—fed for 30 days, 234 lbs raw rye, ground, and 51 pails sour milk—gained 79 lbs —cost 4 44-100 cents per lb.

Oct. 1, 1858, commenced feeding the pigs (fed the pigs first 30 days on cooked feed,) on raw feed, and fed them 316 lbs. ground rye, and 60 pails sour milk—they gained 106 lbs. Fed the other two on cooked rye meal—fed 301 lbs, and 58 pails milk, and gained 89 lbs. Fed all four pigs for 30 days, from Nov. 1 to Dec. 4, on dry meal, and fed 515 lbs. rye meal dry, and water separate for drink—gained 113 pounds—cost per lb., 6 83-100 cents.

Dec. 1, 1858, the four hogs weighed alive 841 lbs.—dressed 673 lbs. Pigs were three-fourths Suffolk and one-fourth native.

I also fed three pigs for thirty days, 15 bushels potatoes, cooked, and 15 pails sour milk—the three gained 68 lbs.—with potatoes at 25 cents per bushel, the gain cost 5½c. per lb., without allowing for milk.

I conclude from the above trials, that one bushel rye is equal to three bushels of potatoes to make pork, and that it will not pay to cook meal for hogs—still two of the hogs from same litter, did the best on cooked feed. B. G. M. *Greene Co., N. Y.*

Advantages of Under-Drainage.

Eds. Co. Gent.—The draining of lands is manifestly receiving increased attention among our farmers, and as a matter of course, information is asked for on all points pertaining to this subject. True, information is contained in books, as well as in the various agricultural publications of the day; but as to the books, only few have them, and papers are constantly receiving new subscribers, and even the old ones want to look at this matter in new aspects, and some of them to be told, over and over again, what kinds of land need to be drained, and the advantages, modes, and profits of doing it.

The *advantages* of draining have much interested the mind of the writer, and as he has investigated these from time to time, he has made a note of his investigations, and now offers them to you for publication in your valuable paper, and if you see fit, you can give them to your readers. I shall, in the present number, say something of the advantages of drainage to wet, clayey, cold land, as this is the kind of land most needing the operation.

1. *Drainage Removes from the Surface Stagnant Water.*—Water remains on the surface of land to become stagnant, only because no outlet is furnished for its escape. A hard impervious subsoil prevents its filtering through it, and sinking down where roots will be uninjured by it. Furnish under currents for the water, and there is no longer a necessity for the water to remain above ground, until changed from a healthful to a poisonous substance, by the continued action of heat and atmospheric air upon it.

2. *Drainage Remaves Surplus Water from under the Surface.*—Those who work clayey soils have frequently observed water settling in their furrows, even when the surface of the land was abundantly dry to work. This arises from the same cause as noticed in the case of surface water. There is no under-ground passage; hence it must remain until room is made for it below, by the slow process of filtration, through a hard soil already saturated with water.

But the trouble is not confined to the plowing. Your crops cannot thrive when their roots are soaked with water. Plant your corn, or sow your wheat or any other grain, and the roots cannot stand in water for any considerable time, without detriment. That water must be removed in some way from immediately below the surface, or you are a loser in your crops. Drainage will remove it.

3. *Drainage Prevents Freezing-out.*—There are not many of our farmers but what know something about "winter-killed wheat," as it is called. Yet, many who know of it to their sorrow, do not understand the causes which produce it. They are simply these: Water expands in freezing. The good housewife knows this, who had the hoops burst off her wash-tub by being frozen up full of water; and so does the good house-band also, who left a quart or two of water in his caldron, and was roused from his slumbers one cold night, by the report made by the cracking of that caldron, under the expansive power of the frozen water which it contained. Now, when the surface of your land is filled with water, and left exposed to the action of frosts, and freezes nights, and thaws days, the expansive nature of frozen water lifts up the soil, and with it the roots of wheat; and the repeated processes of this kind, finally effectually loosen the roots, so that when the earth at length becomes settled, the plant is left upon the surface, a rootless withered substance. What you need, therefore, is to draw off the water from the surface of your soil, and then freezing out or "winter-killing" will cease.

4. *Drainage Lengthens the Seasons.*—This announcement is often a poser; but let me explain. Your neighbor has a gravelly soil, which is fit for working some ten days or a fortnight before your heavy clay land. Why is this? You say, perhaps, that gravelly soil is warm and dry, whereas your clayey soil is cold and wet. But why is that gravelly soil warm and dry? Simply, because water filters through it readily, whereas your clayey soil holds the water on or under the surface, and prevents your land from becoming dry and warm. Hence you have a shorter season than your neighbor; and shorter than you would have if you would draw off that surplus water, by means of under-drains.

5. *Drainage Deepens the Soil.*—"Ah, how can this be?" you ask. I reply: You dig up a mass of clay and leave it exposed, and, as it becomes dry, slacks or crumbles to dust. So you dry your subsoil by removing from it the superabundance of water, and it shrinks and falls to pieces, or relaxes its tenacity to such an extent, that the roots of growing vegetation penetrate and draw from it the nourishment which it has been accumulating during all the years of its former imperviousness. Consequently, under-draining is temporarily equivalent to adding several inches of productive soil to the surface of your land.

6. *Certain Land cannot receive the full Benefit of Manures till Drained.*—You pile manures upon that wet swaly piece of land, and it seems like putting it into a pond, so far as any visible effect upon the crop is concerned. But you drain that swale, and then apply your manure ,and you will no longer be left in doubt as to the effect of the manure. This is an illustration of the comparative effect of fertilizers as applied to soils under different states of preparation to receive and respond to their action. The truth is that much land needs draining before it can receive the full benefit of manures, especially such as bones, wood ashes, and the like.

7. *Drainage Prepares the Soil for the Admissian of the Requisite Air to the Roots of Plants.*—That hard, wet mass of clay which you exposed upon the surface, was inaccessible to air till it became dry. Just so it is with your wet soils. As long as saturated with water they cannot be permeated with air; but remove the water, and the particles of clay shrink and give free access to air, and its healthful influence is witnessed in the more vigorous growth of the plants.

I have a few other "notes" which I have taken, relative to the advantage of drainage; but I will wait a little to see how the above are *approved* and *improved*, before I decide what shall be done with what remains. R.

Profitable Pigs.

In November last I purchased from a neighbor for $3, two pigs, then four weeks old. They were kept in a perfectly dry and warm place, with plenty of clean straw, and fed with the swill from my kitchen. They never had any other food.

Last week a village butcher bought them, to kill as needed, and has to-day made the following return and paid the same:

May 14th, one shoat weighed when dressed..	142½ lbs.
" 17th, " " " " ..	149 "
Total, ...	291½ lbs.
At 8½ cents per pound,......................	$24.77
Cost less than six months ago, ...	3.00
Net Profit,................................	$21.77

Greenbush.

Great Butter Making.

Mr. Charles Burrill, of Kingsville, Ohio, whites to the Ohio Sentinel, "that he has made from one cow, from the 21st day of November, 1858, to the 21st day of February, 1859, one hundred and eleven pounds and twelve ounces of butter, and raised a calf on the milk from the same cow, and that the calf will weigh about 200 pounds. He says the calf had new milk from the cow during the first four weeks, which he thinks lessened the quantity of the butter 25 pounds."

Composition and Management of Farm-yard Manure.

In our volumes for 1857, Prof. S. W. Johnson presented to our readers an abstract of the very elaborate investigations made by Dr. Voelcker, (at present the Chemist of the Royal Ag. Society of England,) in reference to various questions and topics included under the above general title. His abstract was made up, however, not from the original communication of Dr. V., in the Journal of the Royal Ag. Society, but from an outline or synopsis thereof by the celebrated Stoeckhardt, author of "Chemical Field Lectures," in a German Chemical Journal. As reference is frequently made to the results of these elaborate investigations and analyses, in discussions as to surface manuring, and the best times and methods of applying barn-yard manure, and as there is probably, no higher authority to be quoted or appealed to on the subject of the comparative composition of fresh and fermented manure, or that of the changes which it undergoes in passing from the one to the other, we have been induced to lay before our readers the main features of Dr. V.'s researches, and the more important, for practical purposes, of the various results and inferences to which those researches led him, without encumbering them with a mass of analytical details, seldom either interesting or instructive to the general reader or the practical farmer. The original communication of Dr. V. seems much better adapted to our purpose than the German synopsis of it in a *chemical* journal, from which Prof. J. prepared the abstract of it, to which we have referred.

The manure experimented upon was composed of the droppings of horses, cattle, and hogs, mixed with the straw that had been used as litter, and very thoroughly worked over, so as to ensure a manure of uniform composition. Of a lot of manure thus prepared, analyses were made at several times within a year, or while yet fresh and at sundry stages of its decomposition.

The first analyses were made of the fresh manure, when it was only fourteen days old; and in this condition, it gave the following general results:

		Containing nitrogen.
Water,	66.17	
Soluble organic matter,	2.48	.149
do. inorganic matter,	1.54	
Insoluble organic matter,	25.76	.494
do. inorganic matter,	4.05	
	100.00	.643

On subjecting the fresh manure to analysis for ammonia, the percentage of that substance in the free state, or state of volatile carbonate, was found to be .034, and in the state of fixed salts .088,—thus showing that the amount of *ready formed* ammonia in *fresh* manure is very trifling. So small indeed was the amount of this substance going off in the form of volatile carbonate, that a delicate reddened litmus paper held over the manure was not affected at first, and only slightly changed to blue after the lapse of a couple of hours. Total percentage of ammonia, developed and undeveloped, was .780, or of nitrogen, .643.

In the ash—mineral or inorganic portion—of this manure in the fresh state, were found silica, phosphate of lime, lime, magnesia, potassa, soda, chloride of sodium, sulphuric acid, carbonic acid, oxide of iron, and alumina, with phosphates containing .178 per cent of phosphoric acid, in addition to that in the phosphate of lime. As the exact proportion in which each of these was found, is unimportant for *practical* purposes, we omit the tabular statement thereof; but think it of importance to call the attention of practical men to the fact, which a glance at the above-named mineral ingredients will suggest at once to some, namely, that farm-yard manure is well entitled to the name of a perfect and universal manure, inasmuch as it contains *all* the constituents which our cultivated crops require to bring them to perfection, and is suited to almost every description of agricultural produce.

An inspection of the analytical results just mentioned, will bring to view some other particulars of practical value, as,

1. That fresh farm-yard manure, resembling that analysed,—upon which no rain had fallen, and the water of which was consequently due to the urine and the moisture of the droppings, and the litter—consists, in round numbers, of two-thirds water, and of one-third dry matter.

2. That in fresh dung the proportion of *soluble* matters, both organic and mineral, is quite small comparatively, with the *insoluble*. This circumstance fully explains the slow action of fresh dung when compared with the effect which a well rotted manure is capable of producing.

3. That comparatively speaking, but little nitrogen, and of course but little ammonia, exists in fresh dung in a state in which it can be assimilated by the growing plants. Most of the nitrogen, as we shall see by and by, is gradually liberated as the fermentation of the dung progresses.

4. That as far as the inorganic or mineral fertilizing substances are concerned, we find in farm-yard manure, potash, soda, lime, magnesia, oxide of iron, silica, phosphoric acid, sulphuric acid, chlorine, and carbonic acid, —in short, all the minerals, not one excepted, that are found in the ashes of cultivated crops.

5. That of organic fertilizing matters, we find in farm-yard manure some which are readily soluble in water, which contain comparatively a large proportion of nitrogen, and others insoluble in water, and which contain, comparatively, a small proportion of nitrogen. The former readily yield ammonia, while the latter principally give rise to the formation of humic acids and similar organic compounds. These organic acids constitute the bulk of the brown vegetable substance, or rather mixture of substances, which pass under the name of humus.

Fermented Farm-Yard Manure.

With the design of ascertaining the changes which farm-yard manure undergoes in keeping, Dr. Voelcker submitted to analysis a sample of rotten dung, produced under the same circumstances under which the fresh manure was obtained. The rotten sample was at least six months old, possessed a dark brown, almost black color, and appeared to be well fermented, short dung.

The general composition of this dung was as follows:

		Containing nitrogen.
Water,	75 42	
Soluble organic matter,	3.71	.297
do. inorganic matter,	1 47	
Insoluble organic matter,	12.82	.309
do. inorganic matter,	6.58	
	100.00	.606

The proportion of ammonia present in a volatile form was found to be .046, and in the form of salts, .057—an amount, it may be seen by referring back, not much larger than in fresh dung produced under the same circumstances.

A comparison of these analytical results with the numbers obtained in the analysis of fresh manure, exhibits several striking differences:

1. The well rotted dung contains 10 per cent. more water than the fresh. This larger percentage of water may in part be accidental; but it seems highly probable that rotten dung will always be found more moist than fresh dung upon which no rain has fallen.

2 Notwithstanding the much larger percentage of moisture in the well rotted dung, it contains almost as much nitrogen as the fresh dung, with only 66 per cent. of moisture. Supposing both to be equally moist, there would thus be considerably more nitrogen in rotten dung than in an equal weight of fresh. As far then as this most valuable element is concerned, farm-yard manure becomes much richer, weight for weight, in becoming changed from fresh into rotten dung.

3. During the fermentation of the dung, the proportion of *insoluble* organic matters greatly diminishes.

4. Perhaps the most striking difference between fresh and rotten dung, is exhibited in the relative proportions of *soluble* organic matter. Well rotted dung, freed from moisture, contains twice as much soluble organic matters as fresh. As the proportion of soluble inorganic or mineral matters is also greater, and both richer in nitrogen, it follows that, weight for weight, well rotted farm-yard manure is richer in soluble fertilizing constituents than fresh dung, and therefore is adapted to produce a more immediate and powerful effect on vegetation.

Changes during Fermentation.

The principal changes found to occur during the process of fermentation, or more properly putrefaction, are these:

1 The proportion of soluble matter, both organic and inorganic, rapidly increases, and is more easily washed out by rains, as well as more readily available for the growth of plants.

2. Peculiar organic acids are generated during this process of decomposition, which acids (humic, ulmic, &c.,) form with potash, soda, and ammonia, those dark colored, very soluble compounds, and give the dark color to the drainings.

3. Ammonia is produced from the nitrogenous constituents of the dung, and is fixed for the greater part, by the humus substances produced at the same time. That portion of the ammonia which is not fixed, escapes into the air.

4. Organic substances decrease and mineral ones increase proportionately during decomposition. This loss of organic substances is accounted for by the formation of carbonic acid, carbonic oxide, and light carburetted hydrogen, or marsh gas.

The practical result of these changes is, that fresh manure in ripening, becomes concentrated, more easily available to plants, and consequently more energetic and beneficial in its action. But this desirable result is not usually attained without some loss of fertilizing matter. In answer to the question whether or not this loss is considerable, Dr. V. remarks that the *mineral* matters being non-volatile, must remain, if care be taken to avoid their being washed away by heavy falls of rain; that the *carbonaceous* matters are not of very high value, and that the only other constituents which can come into consideration, are the *nitrogenized* matters. The question may therefore be thus simplified: Is the fermentation of farm-yard manure necessarily attended with any appreciable loss in nitrogen? Dr. V. is inclined to regard this loss as quite insignificant, inasmuch as rotten dung, freed from water, contains more nitrogen than fresh, and as the process of decomposition is attended with the simultaneous formation within the manure heap of humus compounds and carbonaceous matters, which are excellent fixers of ammonia. The loss which does occur in exposed heaps, is rather from rains washing out the soluble nitrogenized matters, than from the escape of volatile ammonia. The loss which manure heaps undergo, is principally during the warmer and more rainy seasons of the year, and occurs principally after the constituents have become more soluble by decomposition. Thus he found that at the end of April, there was nearly the same amount of nitrogen as there had been at the beginning of Nov., when the manure was fresh; whereas at the end of August, 27.9 per cent. of the total amount of nitrogen, or nearly one-third of the nitrogen of the manure, had been wasted in one way or another.

As it is certain that for some purposes fresh dung can never take the place of that which is well rotted, farmers will always be compelled to submit a portion of their home-made manure to fermentation; and this being so, it will be some satisfaction to them to find direct proof in the analyses of Dr. V., that as long as heavy showers of rain are excluded from manure heaps, or the manure is kept under cover or in water-proof pits, the most valuable fertilizing matters are preserved. But they should at the same time, remember that after the rotting has been considerably advanced, and the component parts of the manure have become much more soluble than they were originally, then rapid deterioration takes place when exposed to heavy showers of rain. The soluble matters get washed out, and with them a considerable portion of available nitrogen, and the more valuable mineral constituents, are wasted. The analytical data of Dr. V. afford proof that even in active fermentation little nitrogen escapes in the form of volatile ammonia, but that this most valuable of all fertilizing materials, along with others of much agricultural importance, is washed out in considerable quantities by the rain which falls on the heaps, and is wasted chiefly in the drainings of the dung heaps. The manure examined, after keeping from Nov. to April, began to lose both in soluble organic and inorganic matters, and in nitrogen; and by next Nov. it had lost about two-thirds of the organic matters, and nearly a half of its nitrogen. After nine months' exposure to the weather, the total amount of dry matter had decreased very nearly 50 per cent., or from 960 to 488 pounds. This *enormous waste* may be prevented to a great extent, by applying the manure in a fresh state to the land, by saving it from washings, and in other ways.

* * *

To Make Porous Cheese.

A Vermont correspondent of the *N. E. Farmer* gives the following description of the causes of porous, puffy; elastic cheese:

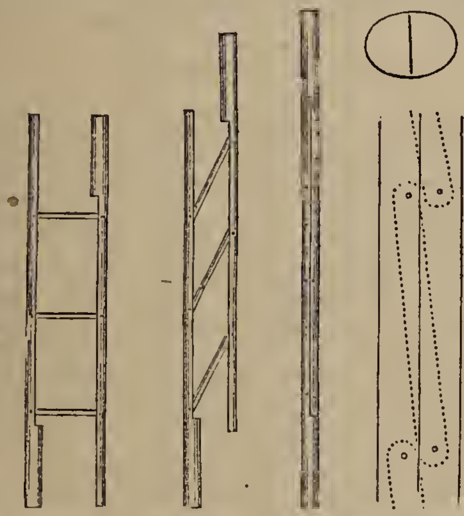
"To make porous cheese, in the first place heat the milk very hot, not scald it, then throw in the rennet; be sure to get in enough, and if you want a very porous cheese, put in a great deal *too* much, so that it will come in a very short time, but don't put in but very little salt, (*not half enough*,) and then don't let the curd stand long enough for the whey to drain off, but hurry it into the press as quick as you possibly can; then let it stand in the press until it is pressed enough, or until you can conveniently attend to taking it out—and my word for it, if you don't have a porous cheese to your satisfaction, a slice of which will stretch out by pulling at each end like a piece of India rubber, as long as your arm, and on letting go of it, will contract into its original dimensions. The world was not made in a moment, neither can good cheese be made without time and care."

Inquiries and Answers.

Plaster or Gypsum.—How is plaster used to the greatest benefit? L. F. Scott. *Bethlehem, Ct.* [The most approved practice generally is to sow about a bushel annually on clover, early in spring, that it may become dissolved by rains and carried into the soil by the time the crop is well under way. If any of our correspondents have discovered by well tried experience a better way, we should be glad to hear from them.]

Manure.—Is it true, as frequently stated, that barnyard manure contains all the ingredients that are absolutely necessary for the perfection of all plants? Is not blight, rust, &c., sometimes produced by the want of some mineral ingredients, as well as by the state of the atmosphere? J. B. B. [Yard manure contains nitrogen, phosphate of lime, magnesia, silica, lime, muriate and sulphate of potash, &c., &c., the different ingredients required in the growth of plants, although some of them are not always in sufficient *quantity.* Hence the advantage of adding lime, gypsum, ashes, bone-earth, &c.]

Fruit Ladders.—Will you have the goodness to give instructions how to make a fruit ladder, in the most convenient form, for use in picking apples, &c.? I have heard of their being made very convenient, but cannot learn on inquiry here, how they are constructed. T. [There are several ways of constructing fruit ladders.

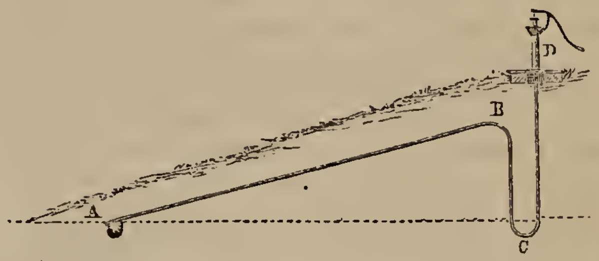


The best one, of which we give a cut and description from Mr. Thomas' "American Fruit Culturist," can be easily understood and readily made. It is made of strong light wood, and when closed it becomes like a round stick, easily carried in one hand. The figure shows the ladder as open, half closed, and as closely shut. The ends of the rounds turn on iron pins, slightly riveted outside. The rounds resting on shoulders, when the ladder is open; renders the whole stiff and firm. When closed, this ladder can be thrust through the branches like a round pole, without the least difficulty, and when once there is easily opened.]

To Prevent Horses Rubbing their Tails.—J. D. asks how to prevent horses rubbing their tails? Go to your nearest doctor or druggist, and get prepared a bottle of "Yellow Wash." Rub a little of it into the hair about the roots of the tail, once or twice a day, rubbing it in well, that it may get to the skin. It will stop the itching, and of course stop the rubbing. B. S. S.

Alsike Clover.—In the Co. Gent. of March 10th, C. L. inquires where he can get seed of the above named clover. Having much faith in the correctness of Mr. Wright's statements in regard to it as a forage plant—(see Co. Gent. of 24th June, 1858)—I have been anxious to obtain some of the seed, and a month or two since sent to the seed-stores in Boston for it, but could procure none. I then sent to the Patent Office, and have recently received therefrom two small packages of seed,—which will be sown on good ground, and at some future time I hope to report favorably respecting it. Probably C. L. and others, could obtain small samples of the seed by writing to the Ag. Department of Patent Office. L. B.

Pumping Water up a Slope.—Below is an inquiry published some weeks since, to which we have been favored with the following answer:—Can I bring water 6 or 8 rods by a suction pump, if the pump stands on ground 6 feet above the surface of water in the well or spring? Would it be better and cheaper than to build a cistern?



Answer.—Lay the pipe in the direction A B C D, or in any other direction touching A C D. C being lower than A, water will not flow back to it. Lay below frost. A. Spring—D. Pump—Dotted line, Level. B. F. Crane. *Carmel, Putnam Co, N. Y.*

Cess-pool Drains.—Can I effectually convey to the manure pile, say through round tile or otherwise, the contents of the privy, by running through the same the warm soap-suds of the weekly washings? The fall is 14 feet in a distance of 210. If it can be done, of what sized bore should the tile be? If you cannot answer this question satisfactorily, can you give me the name and address of some person of experience in such matters, to whom I can write? X. R. B. *Beloit, Wis.* [If the water be in sufficient quantity, and the bore large enough, there will be no difficulty. We think the spare slops and soap-suds of a common family would be sufficient, and tile with a bore of four or five inches would probably do, but six inches would be better.]

Manure and Ashes for Corn.—I wish to apply stable manure and ashes to corn in the hill. Will it be advisable to mix the manure and ashes before applying them? In what proportion should they be mixed? Also, the proper quantity, and the best manner of applying them to the hill? Part of the ashes are leached, and a part unleached. Soil light sandy, containing a large amount of vegetable matter. W. M. Wiley. *Guilford Co., N. C.* [Ashes are applied in several different ways; and as the nature of the soil has something to do with their operation, it will probably require much experience to determine the best mode under all different circumstances. In some places where the soil is sandy, the manure is first applied in the hill, say at the rate of a small shovelful each—the ashes is afterwards applied at the first hoeing by being spread around the hill at the rate of 50 or 60 bushels per acre, and hoed in. If there is much vegetable matter in the soil, more ashes may be used. Ashes may be mixed with manure in compost, so as to become thoroughly diffused through it, at the rate of ten or fifteen loads of manure to one of ashes; the proportions need not be very exact. Leached ashes should be in twice as large quantity or more. Or the ashes may be sowed broadcast by a light shovel or flour-scoop, and harrowed in before planting. All the rain which usually falls between planting and harvesting generally serves only to dissolve them enough to become properly diffused, in whatever way applied.]

Question about Draining.—I have considerable heavy clay land that would pay for underdraining, but I have no outlet; also, a piece of quite wet meadow, which now has a surface drain, but that also has not fall enough to sink it deep enough for an outlet for underdrains. Will it do to dig a well or cistern in the lowest part of the fields, and use that for an outlet or reservoir? An answer from you, or from some of your correspondents that have had some experience in underdraining, will oblige a subscriber. E. T. C. *Monroe Co., Pa.* [An inch of rain on three acres is enough to fill a cistern or well holding a thousand hogsheads. If such a cistern were made, and empty on the start, it would therefore soon become filled. It sometimes happens that by sinking a well, a porous stratum is reached below, through which drainage is effected; but this is not common. The only remedy appears to be a large central drain, carried far enough to produce the desired descent and drainage.]

Diseases of the Horse.—Our correspondent, C. F. Bancroft, East Calais, Vt., is informed that Dadd's Horse Doctor is sent postage free on the receipt of $1, its price, by A. O. Moore & Co., publishers, 140 Fulton street, New-York, and will enable him to examine into the various different causes which produce cough in horses, and especially in relation to the particular case which he describes. Youatt on the Horse is also a valuable treatise, which often goes more minutely into symptoms, and affords many good suggestions on their treatment, although his kill or cure remedies, bleeding, heavy dosing, &c., are not so good as those of Dr. Dadd.

Dwarf Fruit.—*W. S. J., Rock Hill, Mo.* We know of no work devoted especially to the culture of dwarf fruit trees.

Curb in Horses.—I have a valuable colt three years old past, with a curb of perhaps six months standing—is lame after being driven ten or twelve miles. Will some of your numerous readers who have had experience, be kind enough to tell me if it can be cured, and if so, how? E. B. F. [The very best remedy for curb, unquestionably, if it can be applied immediately when the disease first appears, is *rest*. Cold water bandages, cooling linaments, or vinegar, are useful auxiliaries. After the disease becomes chronic, and there is no inflammation, very moderate exercise with linaments producing counter-irritation may be best.]

Wire-Worm.—I have a piece of ground near a river, that is badly infested with the wire-worm. Is there any thing that I can apply to the hill or otherwise, so that I could get a crop of corn or roots of any kind the present year? The ground froze up so early last fall that I did not plow it then. I wish to turn the sward over this spring and plant it. H. Capron. *Uxbridge, Mass.* [We know of nothing better to repel the wire-worm, than a plentiful application of fermenting manure. Can any of our correspondents give a better remedy?]

Mill Screenings for Horses.—I have been feeding mill screening to my horses for about one month, but yesterday was told by the miller that they were "totally unfit for horse feed," and would "give them the *heaves* in a short time." Now can you tell me if this is a fact, and if such will be the result of my month's feeding? Also, please inform me what is a good, reasonably cheap feed for work horses, as all kinds of feed are high in this locality. J. G. J. *Washington City, D. C.* [We hope some of our correspondents who have had experience in this matter, will give the information desired.]

Soft-shelled Eggs.—Can you inform if there is any remedy to prevent turkeys from laying soft-shelled eggs? I have one which has free access to lime and pounded oyster shells; and she has layed about six eggs, all of them having no outer shell. H. R. W. *Baltimore, Md.* [Can some of our correspondents answer the above inquiry?]

Removing Films from the Eyes of Cattle.—Co. Gent., Vol. XIII, p. 273. Half a teaspoon full of salt thrown into the eye soon after the injury, will usually remove the film. Another remedy, perhaps more effectual if badly hurt, is molasses and fresh butter—equal proportions. F. G. Ely. *Ripley, Chau. Co.*

Draining.—Co. Gent., Vol. XIII, p. 273. "A Subscriber" may cut a ditch around the three hill sides of his ten acre lot, as wide as necessary, and considerably deeper than the other drains leading into it. A pump can be erected on the milldam side of the lot; it may be either a screw, force, or common lift-pump. Wind power to drive a pump can be purchased of Levi Ryan, Middletown, Del. Shaft sixteen feet high, which will be sufficient power to keep 50 acres dry enough for cultivation, if the soil is good and firm. J. Jones.

Cedar Buckets.—To an inquiry, "how to season Cedar Buckets," I answer: Varnish the inside with simple "shellac varnish." Some of our brewers here build immense vats of cedar, (which gives the liquor an exceedingly disagreeable astringent taste,) and varnish the inside as above, and have no further trouble. Nothing is so efficacious, *I know*, as I have seen vitroil, lime, &c., all tried, but this answered best. Alcohol and shellac, which are both cheap, are all the ingredients. They will not need it a second time. Joseph G. Taite. *Philadelphia.*

Dwarf Apples.—Please inform me what a dwarf apple is. J. R. Gillespie. *Aberdeen, Ind.* [A dwarf apple tree is any desired variety of the common apple budded on the dwarf or Paradise stock, (which is a very small species of apple,) thus reducing its growth, so that it attains only a few feet in height, and the trees may be planted but a few feet apart in gardens, like currant bushes. The Doucain stock is of larger growth than the Paradise, and apples worked upon it make larger trees, midway in size between the small dwarf and the standard, and are suitable for fruit gardens, where the common apple would become too large.]

New Publications.

Farm Drainage. The Principles, Processes and Effects of Draining Land, with stones, wood, plows, and open ditches, and especially with tiles; including tables of rain-fall, evaporation, filtration, excavation, capacity of pipes; cost and number to the acre of tiles, &c., &c. By Henry F. French. New-York: A. O. Moore & Co., Agricultural Book Publishers, 140 Fulton-st.

This work by Hon. Henry F. French of New Hampshire, may be called a complete and thorough work on the subjects treated. The principles, processes, and effects of draining; the different methods of using stone, wood, tile,—in fact every item in relation to complete and systematic draining has been given in this volume. Judge French is a clear and vigorous writer, a farmer of close and varied experience, and a man eminently fitted for the task of preparing this work. It has been looked for with great interest by the agricultural press, as well as by farmers throughout the country; and now we have in a volume of nearly 400 pages, a complete treatise on farm drainage, by an American author—the most comprehensive and valuable work on the subject, that has been written on either side of the water. Price $1. We have ordered a supply and will furnish free of postage to any one remitting the price.

Hints to Horse Keepers: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forrester.) Beautifully illustrated. New-York: A. O. Moore & Co., Agricultural Book Publishers, 140 Fulton street.

A work, the first part of which was written by the late Henry William Herbert—containing valuable information on the management, care, and keeping of this most noble of all domestic animals—and completed by an eminent hand—one who fully carries out and completes the plan—has been issued by A. O. Moore & Co. of N. Y. Works on horses have been very numerous of late, and among such a vast number, it must be expected that much repetition will occur. Mr. Herbert gave to the world, but a short time before his death, an important and truly valuable National Work, on Horses and Horsemanship in the United States, and British Provinces of North America. It was an expensive publication—issued in a high style—and sold at a corresponding high price. But the want yet was a general work on the horse; one complete, and yet not high priced; in short, a book that would benefit everybody who owns or drives a horse, and one which such should not be without. This recent publication is a work of that class. It comprises matters of interest and value to all who own a horse; treats of breeding, buying, educating, using, feeding, driving, and riding—in short it is a complete manual for the farmer or stable-keeper, a *vade mecum*. To this is added several chapters on carriages, harness, and general matters. The book is well got up, finely illustrated, and sent by mail, postpaid, for $1.25.

A Practical Treatise on the Hive and the Honey-Bee. By L. L. Langstroth, with an introduction by Rev. Robert Baird, D. D. Third edition, revised and illustrated with seventy-seven engravings. New-York, A. O. Moore & Co., Agricultural Book Publishers, 140 Fulton-st.

It is a luxury to have agricultural works issued in so becoming a style as the present and other recent volumes published by the same house. We need not speak of the merits of this third edition of the Treatise of Rev. L L. Langstroth, either as a literary production, or as a plain, practical manual for the apiarian. This edition has been re-written, and the latest discoveries of the author are added. The illustrations—about eighty in number—are finely executed, and the work will be an ornament to any library or book-shelf in the land. Even if one has no interest in keeping bees—simply as a work on Natural History, and as conveying a vast amount of curious information on the honey bee—it will be an agreeable volume from which to learn the habits of those little

> "Creatures that, by a rule in Nature, teach
> The art of order to a peopled kingdom."

Report of the Kentucky State Agricultural Society for the years 1856 and 1857. Prepared by Robert W. Scott, Cor. Sec.

A volume of nearly 600 pages, embracing the Report to the Legislature of Kentucky of the Secretary of the State Agricultural Society, has been forwarded us by F. J. Flanagan, Esq. It contains the reports of the County Agricultural Societies, Historical Notices of the Early State of Agriculture in Kentucky, full reports of the State Fairs for 1856 and 1857, and a large number of essays, relating to the stock, industrial resources of the State, fruit, &c. Illustrations of the prize stock from the farm of R. A. Alexander, add much beauty to the volume.

Wheat and Chess.

Our correspondent at Fincastle, Va., who states a case where a crop of chess took the place of an expected wheat crop, is referred for an answer to his question as to how the seed of the chess came there, to our remarks on page 138, current volume of the Country Gentleman, and also to several articles in the previous volume. In the meantime, we wish to remind our readers who believe that wheat will turn to chess, if there be any such readers, of the

FIVE HUNDRED DOLLARS REWARD,

offered some months ago by one of the editors of this paper, (the offer to continue till the end of this summer,) to any one who will furnish us with the first single plant caught in the act of transmutation, so that the same root shall have distinct wheat and distinct chess. Out of the billions of plants which are undergoing this change every season, if there is any such change, there must be many which stop half way. Advocates of transmutation have often asserted that such plants were found, but having failed to get a sight of them, the above reward is offered. But, as was stated before, in order to secure ourselves against the annoyance of spurious demands, every applicant in presenting a claim must accompany it with a hundred dollars, which will be returned with the five hundred dollars in case the claim for the reward is sustained. The publishers of this paper will become responsible for the payment of the award on these conditions; and if not claimed the advocates are expected "ever afterwards to hold their peace."

Lumps on the Jaws of Cattle.

Messrs. Luther Tucker & Son—Seeing an article in the March number of The Cultivator, respecting lumps or holdfasts on cows' jaws, I thought I would write a line and let the public know a little of my own experience. Last spring I had a cow that had a holdfast on her jaw. It was about the size of a hen's egg when I first discovered it, and on examining it I found it was very hard, and fast to the bone. On showing it to one of my neighbors, we came to the conclusion that I should have to turn her dry and fit her for the butcher. I was very sorry to think that I must part with her, for she was an excellent cow. Having been a reader of The Cultivator for the last eighteen years, I thought I would look them over, and see what I could find that might enlighten me on the subject, and finding a receipt for a linament for swellings on animals, recommended by A. Willard, Jr., of Hartford, I thought I would try it. It consisted of the following articles, viz:

Half an ounce Spirits Hartshorn.
One gill Spirits Turpentine.
Half a pint Sweet Oil.
Two ounces Gum Camphor.
One pint of Alcohol.

Dissolve the Camphor in the Alcohol, and then mix all the ingredients together.

I commenced applying the mixture once a day, and rubbing briskly with the hand. In about ten days it became loose from the jaw, and in two weeks more it became soft, and I opened it, and it discharged freely for a number of days. I kept up the use of the linament daily, and in a short time it healed up sound, and is now as well as the other jaw. So much for taking the Cultivator. David Berry. *Newington, N. H.*

How a Chick is Hatched.

In conversation with Judge Butler of Norwalk, a few days since, he explained the operation of the hatching process, which is so beautiful and philosophical, that as we have never seen it explained in books, we repeat it to our readers.

The chick within the egg breathes through the shell; in the silky membrane lining the shell the blood circulates, and is thus brought in contact with outer air.

The head of the chick is in a position as if it had been brought round under the wing and over on the back—a little one side of course—in such a position that the least muscular exertion will press the beak against the shell, and about in the middle, and when any violent struggle is made, it will break a little hole in the shell. Now this little movement of the head, perhaps an eighth of an inch forward, turns the chick in the shell so that when the head is drawn back into its normal position, it is brought against another portion of the shell. The next struggle breaks a fresh hole, and so on, each struggle making a new opening in the shell.

These struggles, as the chick gains strength from breathing the fresh air, become more frequent. Finally, in the course of half a day perhaps, as it goes on turning itself in its shell, the little blood vessels which originally formed a connection between the chick and the lining membrane of the shell, are drawn so tight as to prevent circulation, or are twisted off, and when holes have been punctured and the shell cracked about two-thirds around, the shell falls apart and the young chanticleer steps out into a new world.

Occasionally the lining membrane of the egg is so tough that the shell parts from it, and leaves it unbroken, except in the little holes described, and so if not seen in time the chick dies; a pair of scissors will effect a liberation.

It is dangerous to attempt to take a chick from the egg before it has, as will be evinced by the cracked shell, turned itself nearly or quite two-thirds round; otherwise the blood vessels spoken of will be broken, and the chick either bleed to death or be long in recovering.

The whole process may be watched if the egg be kept warm in the hand, and observed as its struggles call attention to it. This will not interfere with reading or writing, and is instructive and interesting.—*Homestead.*

Average of Corn and Hay Per Acre.

Messrs. Editors—Your excellent Journal contains instruction on all topics, and for all persons; and particularly on the prominent products of New-England farms—*Indian Corn* and *English Hay*. Can you give the public a reliable estimate of the actual amount of these crops respectively, and which is the greater crop? What is the average value of these products per acre, as taken from the field? We are apt to speak of them (as I have frequently done,) without any precise knowledge of what we are saying. If I were to guess at a sum expressive of the value of the average products per acre—exclusive of the extra expense of culture during the season—it would be about *thirty dollars*. What say you to this sum? Is it too high or too low? or what would be your *guess?* J. W. Proctor. *So. Danvers, Mass.*

We have no statistics by which we can give the amount of these crops for the New-England States. In New-York State, by the census returns of 1855, the hay crop of the whole State was as follows:

No acres.	*Tons of Hay.*
3,384,440¾.	3,256,948⅞.

The average being less than one ton to the acre!

The only counties in the State which average more than one ton of hay to the acre, are Chautauque, Chemung, Chenango, Columbia, Dutchess, Erie, Genesee, Herkimer, Kings, Livingston, Monroe, Montgomery, Niagara, Oneida, Onondaga, Orange, Orleans, Putnam, Queens, Richmond, Rockland, Suffolk, Tioga, Wayne, and Westchester.

The corn crop, by the same returns, stood thus:

Acres planted.	*Bushels harvested.*
917,601.	19,290,691½

This would give an average of but 21¼ bushels per acre!—a result which it seems about impossible to credit. To test the figures, we have gone over the tables, and compiled the average product of Indian corn per acre in the different counties. It is—omitting fractions—as follows:

Albany county,	15	Oneida,	27
Allegany,	29	Onondaga,	28
Broome,	26	Ontario,	25
Cattaraugus,	30	Orange,	17
Cayuga,	28	Orleans,	30
Chautauque,	28	Oswego,	24
Chemung,	33	Otsego,	27
Chenango,	32	Putnam,	27
Clinton,	15	Queens,	24
Columbia,	14	Rensselaer,	19
Cortland,	32	Richmond,	27
Delaware,	21	Rockland,	15
Dutchess,	16	St. Lawrence,	17
Erie,	25	Saratoga,	16
Essex,	17	Schenectady,	16
Franklin,	17	Schoharie,	22
Fulton,	22	Steuben,	22
Genesee,	26	Schuyler,	23
Greene,	10	Suffolk,	28
Hamilton,	16	Seneca,	23
Herkimer,	29	Sullivan,	23
Jefferson,	17	Tioga,	33
Kings,	27	Tompkins,	25
Lewis,	20	Ulster,	13
Livingston,	27	Warren,	17
Madison,	30	Washington,	22
Monroe,	26	Wayne,	25
Montgomery,	23	Westchester,	31
New-York,	38	Wyoming,	26
Niagara,	29	Yates,	15

By this table we make the average of the whole State, to be a fraction less than 23½ bushels per acre. But can it be possible that the corn crop of Albany, Columbia, Greene, Dutchess, Orange, Rockland, and Ulster counties, yields less than 20 bushels per acre?

A Cure for Horses Rubbing their Tails.—In answer to J. D.'s inquiry, page 241, vol. xiii, no. 15, as regards horses rubbing their tails—Wash, three or four times with stale urine. It is a most effectual cure. J. Owens

New-York State Ag. College Farm.

Near Geneva, May 7, 1859.

Messrs. Tucker & Son—I last week made a visit to our *State Agricultural College Farm*, and I assure you I was highly gratified with my visit. There certainly is no finer location to be found. The view and scenery cannot be excelled. The farm contains about 700 acres, and it has almost everything within itself, that a man of intelligence could desire to make one of the best farms in the country. In the first place there is clay enough to make any quantity of tile and brick—(they are now making the brick for their buildings in process of erection.) Then they have springs at the highest point on the farm, of sufficient capacity to furnish a supply of water for all the buildings, as well as for irrigation of almost the entire farm. In addition, there is an inexhaustible quarry of limestone—a kiln already built to burn lime for the buildings. There is water power sufficient to propel all the machinery they will want on the farm for farm purposes—a small grist and saw mill now in operation. In fact they have, or can have, everything on the farm that the most enterprising farmer can ever want. *It is a most desirable field for enterprise*, and the most so I ever saw on the same extent of land.

I would strongly advise the draining of at least one hundred acres at once. If the tiles should be made on the farm, it can be drained for less money than mine cost me by five or six dollars per acre. The facilities for outlets are very favorable, and comparatively few main-drains would be required, and unless the excavation is harder than I anticipate, it can be drained, and *return an immense profit*.

If their head farmer, Mr. Wands, had 100 acres drained, I am satisfied he would produce fine crops, as he is one of the kind of men that suits me. He is a practical working man, and I advised him that he could do far more by head work and superintending than by his personal labor, where there are so many laborers to see to. If the trustees should drain 100 acres this season, and burn lime so as to apply 100 bushels per acre, I should take great pleasure in visiting the farm to witness the result. It would also be a pleasure to spend a few days in assisting Mr. Wands in laying out the drains—he would soon be able, from witnessing the manner of doing the work, to be entirely competent to carry it on without difficulty. John Johnston.

Profits from Poultry.

At a late discussion on poultry by the Concord Farmer's Club, as reported by a correspondent of the *N. E. Farmer*, J. B. Farmer, remarked as follows:—

"Last year he had 20 hens, and raised 150 chickens; did not know how many eggs; his hens cost him one half a cent per day. This year he had 30 hens; in January he had 50 dozen eggs, minus three eggs; he got 30 cents a dozen. Bought 150 pounds of beef, and kept it by them while it lasted; he pounded up the bones; the hens eat pounded bones greedily. He gives them warm dough once a day in cold weather. If we keep hens for the eggs only, he thinks the Poland, or Black Spanish, or Bolton Greys, are better than the larger breeds. It is profitable to raise chickens; his hens range over a 10 acre pasture; he keeps scraps by them. Hens should be treated gently; hens that are perfectly tame will lay twice as many eggs as wild ones; he thinks hen manure better than guano. Last year he had enough to manure three acres of corn in the hill."

Soap-Suds.—They are valuable; do not throw them away or waste them. Procure a barrel, and have it set where the suds can be readily taken from it for use. They make the *very best* manure for flower roots, currants, grapevines, &c. This sort of plants have a thirst for just such drink.

Notes for the Month.

Agricultural Market Fairs.—We have received from the Massachusetts Board of Agriculture, a circular in relation to establishing "Market Days," or "Fairs." In connection with this, is a prize essay on the subject, from A. W. Dodge, of Hamilton. It is a paper of great interest, and presents an able appeal for market fairs to be held at certain seasons of the year, not only for produce, but stock and farm merchandise generally. This has long been a custom in Great Britain, and we see not why, with proper regulations and principles to control them, they cannot be made of great advantage to our farmers. The votes passed at the meeting of the Agricultural Board in regard to this subject, were:

Voted, That this Board recognize the great importance of establishing frequent Markets or Fairs, for the sales of Agricultural products.

Voted, That the subject be brought before the County Agricultural Societies, with the request that they will take early steps for the establishment of Markets within their respective districts.

In another place will be found an article on this theme from our correspondent Columella, to which we call special attention.

Report on the Geological Survey of the State of Iowa: Embracing the Results of Investigations made during portions of the years 1855, '56, and '57. By James Hall, State Geologist, and J. D. Whitney, Chemist and Mineralogist. Published by the State of Iowa. Charles Van Benthuysen, printer.

In 1855, the Legislature of Iowa passed a law providing for a Geological Survey of that State. Under this law, Prof. James Hall of this city, was appointed State Geologist by the Governor, and Mr. J. D. Whitney of Northampton, Mass., to the department of Chemistry, Mineralogy, &c. In the two handsome vols. named above, and for which we are indebted to the kindness of Prof. Hall, we have the first portion of the results of the labors of these gentlemen. They exhibit the wisdom of the Governor in his selection of gentlemen to make the Survey, the science and energy with which it has been prosecuted, and are an honor, not to Iowa only, but to our country. The work is issued under the personal supervision of Prof. Hall, and is alike creditable to his fine taste, and the skill of the engravers, printers and binders.

Illinois State Fair, 1859.—We have received from Mr. S. Francis, Sec., a circular containing regulations and premiums for the Seventh Annual Fair of the Illinois State Agricultural Soeidty. The exhibition is to be held at Freeport, Stephenson Co., commencing on the 5th of September next, and continuing five days. The Society offer sixteen thousand dollars in premiums.

Horticultural School for Females. — Mrs. Phelps of New-York city, proposes to erect on Long-Island, an establishment for training young orphan girls in the art of Horticulture—an art requiring patient care rather than physical strength. Buildings are now in process of erection, and Mrs. Phelps has bestowed a valuable plot of land. The branches of industry will include the raising and preservation of fruit and vegetables; the scientific culture of flowers; the breeding of poultry, and everything that can be done by woman heartily and well. This is a move in the right direction, and we wish it every possible success.

Ohio Wool-Grower's Convention.—"A call," signed by Messrs. A. Hildebrand, John Noble, Henry Everhard, Simeon Perkins, and other prominent wool-growers of Ohio, for a "Wool-Grower's Convention," to be holden at Cleveland, O., on the 4th of August next, appeared in the last Wool-Grower. It seems to us that the plan of the proposed fair, will be received with approbation. Its object is, to exhibit the various samples of wool, awarding such premiums as an impartial committee of manufacturers shall decide—competition is open to every wool-grower in the United States. The many advantages resulting from such a fair, are apparent to all. There the producers and consumers will meet face to face, and by a personal intercourse, will become well acquainted with the wants of both parties; and each will be able to make suggestions, which must prove of benefit to all. The move is a good one

Carpet Fasteners.—A very simple contrivance for the purpose of fastening down carpets—the invention of some Connecticut Yankee—has been sent us by Joseph Budd, 324 Broadway, Albany, of whom they can be had. It consists of a small copper fastener, about an inch in length, having at one end two hooks or catches, and this being tacked down, the edge of the carpet is drawn over it, and thus securely fastened. It can be removed at pleasure, and no trouble of drawing tacks is incurred, and with no danger of tearing the edge of the carpet.

Mice Destroying the Osage Orange Hedge.—Mr. J. D. Cattell of Salem, Columbian Co., O., writes that the field mice are eating up all the roots of the Osage Orange hedges in that region; so much so that they are utterly destroyed, and the cultivation of them must be abandoned unless some one can give a remedy. We have supposed, that the great superiority of this plant for live fencing, was its freedom from all insect and animal destroyers; but if no remedy can be found against the ravages of mice, it will be useless to set the plants. What shall be done?

Maple Sugar.—The present has been a very bountiful sugar season. A correspondent of the Vermont Chronicle says—"Judging from the amount made in one medium neighborhood, averaging 1,528 lbs. to each farmer, and from the quantity made year before last, about 175,000 lbs., we set our town, Cambridge, Vt., at 185,000 lbs., and think this an under-estimate. We have in Lamoille Co., Vt., ten towns, all sugar-making, (Cambridge one of them,) and, calculating from the population in each as compared with our own, we think it safe to say 900,000 lbs. for the county."

Horses for France.—We saw on board the steamship Vanderbilt, which left New-York for Havre on Saturday last, three splendid horses, selected and shipped for the Emperor Napoleon. The groom in charge of them informed us that one of them was bred in Vermont, one in New-Jersey, and the other in Kentucky.

Third Vol. Devon Herd-Book.—Sanford Howard, the American editor of this work, gives notice that the third volume of the American edition of the Devon Herd-Book will be put to press in a few days by Messrs. Brown, Taggard & Chase of Boston, who will issue it in four or five weeks. A circular will be sent to subscribers informing them when the work will be ready.

Michigan Ag. College.—Hon. Joseph R. Williams has resigned the presidency of this institution—as have also we believe some of the other officers connected with it. R. F. Johnstone, Editor of the Michigan Farmer, has been appointed Superintendent of the farm belonging to the College.

Four Tons and a Half of Milk.—The papers say that a cow owned by "Hon. Mr. Buffinton of Fall River, has yielded during the past year 4,764 quarts of milk, or 13 17-365ths quarts per day, which was sold for six cents per quart, amounting to $285.84. The cost of the cow and feed was $198.45, making a net profit of $87.39 in one year, $13.39 more than the original cost of the cow, which was $74." This, at the rate of two pounds to the quart only, would amount to over four and a half tons of milk from one cow in a year.

Ag. Education for Farmers.—A correspondent in Yates county writes us as follows:—"Were I to plan an Agricultural college, I would have its professorships so richly endowed by the State that no tuition fee need be exacted from the student. The course of instruction should be confined to the winter months, and should consist mainly of oral lectures. Three years attendance, and a satisfactory examination, should entitle the pupil to his Degree as Master of Agricultural Sciences. With each returning spring, a thousand boys should be sent back to their scattered homes, there to earn in practical farming their year's support, and to play their part in the collision of their new ideas with those of their fathers or employers. Such a college would tend widely and promptly to diffuse science already known. Instead of belonging exclusively to rich men's sons, its instructions and its honors could be reached by any able-bodied young man, who from sixteen to twenty years of age, had only himself to maintain."

Running in Debt for a Farm.—Our correspondent G. H. B. wishes our advice on the subject of purchasing a small farm of 14 acres. It is within two miles of a town of 8,000 inhabitants—the land is sand and black loam, clay, and an intermediate; good house, barn, &c., and will cost $1,700, more than one thousand of which he will have to run in debt for. He wishes to know if it would be best for him to purchase it—whether he could pay for it, with its products in farm crops, small fruits, &c.

We have often received similar inquiries, but it is impossible for us to answer them unconditionally. The practice of running in debt for land, we cannot commend. There are a few,—perhaps one in a hundred,—who have such inherent energy of both body and mind, combined with good judgment and business tact, that they will pay off a large debt on the farm occupied, and erect buildings and make other improvements at the same time. But with the other ninety-nine, a heavy sum of money to pay, and accumulating interest, operate as a constantly retarding influence on enterprise and energy, by consuming the means that ought to be applied to keep the machine in motion. Every thing almost depends on the character of *the man*—and while one will succeed at any business and any where, others will entirely fail under the most favorable circumstances. As a general rule,—never depend on what may be done *for the future*, that is not founded on actual personal experience. For example,—if our correspondent, who now occupies the land he proposes to buy, has already made enough from it to support his family and pay more than its interest yearly, he may make the purchase. If, on the other hand, he depends on some untried business in which he has not yet had experience, he will probably find his estimates and actual results not in very close proximity.

Tobacco Seed from Cuba.—Mr. Oliver T. Bragg, who has recently returned from a brief residence in the Island of Cuba, writes us, that from his observation he thinks the best quality of Cuban Tobacco may be cultivated in the United States with perfect success. He procured a quantity of genuine tobacco seed, grown in the district of Pinar del Rio, in the western part of the island—and will send a small quantity of this seed to all who may wish it, *free of charge*, provided they will report to him the success which attends its cultivation. Mr Bragg's address is St Louis, Missouri.

Stay Where You Are.—Do not live and work on your farm, with the expectation or wish to *sell out*. Nothing will keep a man so much in a state of indecision. Living from day to day, with the idea that just as soon as you have a chance, you are going to sell, is one of the poorest ways of getting along Make up your mind to stay where you are. Apply energy and headwork to your operations; determine to make a home—one for yourself and your family—have a marked and definite purpose in life.

Rutland Co. (Vt.) Ag. Society.—From Henry Clark, Sec., we have received a circular containing rules and regulations of this Society—the Fourteenth Annual Fair of which is to be held at Rutland, Vt., Oct. 5th and 6th, 1859.

Sale of Mr. Wetherall's Stock, Yorkshire, Eng.—We learn from the North British Agriculturist of April 20th, that Mr. Wetherall's herd of Short-Horns was sold at public sale, the 19th. The attendance was very large—many of the most eminent breeders of Short-Horns being present. The competition was sharp, and the prices equalled some of the highest averages obtained in England. Thirty-five cows and heifers, and fifteen bulls were disposed of. The average being for the former, $387; for the latter, $301. Gross sum for cows, $12,945; for bulls, $3,725; total, $16,670.

The Crops.—Accounts of the state of the crops in various sections of the country, as brought us by exchanges and letters, report favorable and promising. In all parts of Ohio, Kentucky, and most of the Western and Northern States, the prospects were never better for large and bounteous crops.

State Fairs.—Active preparations are in progress for State Fairs to be held throughout the Union. Two or three have been announced in our columns, and we this week have the following to report: Georgia State Fair, Atlanta, Oct. 24th, 28th—Kentucky, Lexington, Sept. 13th, 17th, 1859.

The Agricultural Review; and Irish Country Gentleman's Newspaper.—The second number of a weekly journal of 16 large quarto pages each, bearing the above title, has reached us from Dublin, Ireland. It is edited by Professor Charles A. Cameron, and the number before us gives evidence of spirit, life, ability, and practical worth. It was formerly issued as a monthly, under the first part of the above title; but a change having occurred, it adopts the remaining part, and is a really valuable "Irish Country Gentleman's Newspaper."

Price of Barometers.—In the last Co. Gent. the price of barometers is given at $20, $30 and $40. These are about double the prices at which they are made at Rochester, but the maker's name I do not recollect. I have an excellent barometer made some years ago at Rochester by Kendall & Taylor, for which I paid nine dollars—which was the wholesale and not the retail price, the latter being I think, $12. It has a nonius, and is very accurate. It will show hundredths of an inch. v.

Sorgho and Imphee.—We have cultivated the China sugar cane the two last years, with the most complete success, growing from 12 to 14 feet high, with stalks from 1 to 1¾ inches thick. We had it ground and boiled down to an excellent syrup, equal to the best sugar-house molasses. We also grew three varieties of the African Imphee, but do not think any of them superior to the Chinese cane. None of them grew so large; they were not so early, nor did they give a larger quantity of saccharine matter. W. Dennis.

Ag. Periodicals.—Through all the sixteen years of my medical practice, I have lost no opportunity to urge upon my agricultural friends, the value to them of periodical publications devoted exclusively to their interests. Experimental farms and the costly colleges pertaining thereto, will accomplish but a part of the good expected of them. "The Country Gentleman" will outstrip them all, through his weekly visits, which carry science, and taste, and humanity, to many a home beyond the reach of collegiate influence. s. r.

A Hint.—It may not be too late to say to our readers, that the whitewashing of cattle and horse-stalls, as well as the inside of hog-pens and heneries, not only renders them more healthy, but prevents the animals and fowls from being infested with troublesome and filthy vermin.

Mummy Wheat.—Enclosed I remit you a few "Egyptian Mummy Wheat" grains. It purports to be from the original grain which was found in one of the Egyptian pyramids some three or four years ago. I got it at New-Orleans, La., last May, it costing two cents a grain. From *nine* grains, I raised *one gallon* clean seed. If you have seen it before, what is your opinion? If not, please plant this. M. D. Bowman. *Vincennes, Ind.*

Farmer's Clubs.—We are getting quite interested in this region, in regard to our avocation. We have an interesting "Farmer's Club," meeting weekly, at which, once in four weeks, one of the members delivers an address. Our discussions elicit much interest. Besides the 20 numbers of The Cultivator, there are taken at our P. O., a club of "American Agriculturist," one of the "Prairie Farmer," and the "Country Gentleman." Our town is sparsely settled, and is entirely an agricultural district. We number about 100 voters, and have not a rum shop. J. B. Jones. *Low Moor, Iowa.*

Massachusetts Conservatory of Art, Science, &c.—The second number of the Conservatory Journal has reached us. It is issued under the direction of Mr. W. E. Baker, and devoted to establishing a "Massachusetts Conservatory of Art, Science, and Historical Relics." At a recent meeting of gentlemen representing the Association of Agriculture, Art and Science, addresses were made by Prof. Agassiz, Dr. H. H. Gould, Hon. M. P. Wilder, and other eminent men. The plan is to establish a general Literary Exchange; to found an Educational Institution that shall disseminate its influence freely to all, and tend by its exchanges with similar institutions in the world, to bring all together upon the safest foundation of all peaceful relations—the general diffusion of knowledge, by interchange of mechanical, scientific, and artistic benefits and influences. We should have noticed this before, but the circular received from Hon. M. P. Wilder was mis-laid. The enterprise is a worthy one, and the object of great importance. What Massachusetts men take hold of, is sure to go.

Housing Tools.—At this busy season of the year, farmers are very apt to neglect to properly house their carts, plows, and farming tools. They are left in the field at night, where they are likely to be wanted on the morrow; but a storm comes on and the tools are exposed through a drenching rain. This injury done to the tools by being exposed to a rain and then using them in the sun, is greater than may be at first supposed. It is slight at first, and imperceptible, and that is the reason why farmers do not notice it. A pair of cart wheels properly housed both in summer and winter, will outlast two pair suffered to stand out in all weathers, and through all seasons. A farmer will buy a plow or a pair of cart wheels, and after using them for a few seasons, taking no pains to protect them from the weather, he will—as they begin to get out of order—say they were not made good; when the fact is, he has neglected to house them, and the rain has found its way into the joints, decay began, and after a short time they are gone. A cheap, temporary shed, for the purpose of stowing away farm tools, is an indispensable building upon every farm.

Value of Root Crops.—Mr. A. Blanchard of Allegany county, says in the *Rural New-Yorker*, of Feb. 26: "We have pursued with varied success, the raising of roots, for the last ten or fifteen years, and can safely assert that no part of our farming, for the amount of ground cultivated, has paid so high a per centage. We have mostly cultivated the ruta baga and Swede turnip, in connection with the mangold wurzel and carrots. We have raised of the turnips, in good seasons, from six to eight hundred bushels per acre, at a cost not to exceed sixpence a bushel, and for stock feeding purposes we consider them well worth twenty-five cents per bushel. We have of late years practiced Mr. Needham's plan of feeding roots in connection with straw, and think stock will do better on this feed than hay alone. For fattening purposes they are excellent—we have fatted our beef for years, on roots alone."

Planting Squash and Pumpkin Seeds.—An eastern writer says that squash and pumpkin seeds, lying flat in the hills when planted, do better than those planted edgewise, throwing off the skin of the seed more readily, and without injuring the leaves.

Iowa State Fair.—The Iowa State Ag. Society will hold its Sixth Annual Exhibition, at Oskaloosa, on the 27th—30th of September, 1859. A copy of the Regulations and Premium List has reached us from the Secretary, Mr. J. H. Wallace. The Society offer a combined reaping and mowing machine, to any farmer in Iowa who shall raise the best five acres of spring wheat in the year 1859. A commendable prize.

☞ We are informed that Mr. E. Marks of Camillus, N. Y., has recently sold the imported Short-Horn bull "Marquis of Carrabas," (11789,) for the improvement of the herd of W. R. Randall, Esq., of Cortlandville, N. Y. The Marquis, though eight years old, retains all his vigor and activity, and is perfectly docile.

Prolific Flock.—Mr. John Deering of Kendall's Mills, Somerset Co., Maine, has a little flock of fifteen sheep, which this spring make him the following report: One has three lambs; seven have twins; two yearlings are barren, and two will bring lambs. Eleven sheep have thus twenty lambs, all of which are alive but two; the whole flock being now 33! If any flock can make a better report, or any other farm stock present a better table of profit, we hope to hear of it.

Wheat as Food for Stock.—A correspondent of the *Mark Lane Express* says that wheat boiled with a small quantity of roots will fatten cattle faster than the same value of best bruised oil-cake will do. Another has fattened pigs on wheat boiled with potatoes, and found them to "thrive most wonderfully." Linseed cake is too high, compared with most other food for stock—an evil which farmers can readily cure by refusing to buy it.

Cruelty to Animals.—The following bill has passed the Massachusetts Legislature, receiving the approval of the Governer: "Every person who shall cruelly beat, maim, or torture any animal, shall be punished by imprisonment iu the county jail or house of correction, not more than one year, or by a fine not exceeding one hundred dollars."

Cure for Hydrophobia.—A correspondent of the Providence Journal says in regard to this: "Eat the green shoots of asparagus raw, sleep and perspiration will be induced, and the disease can thus be cured." This remedy proved effectual to a man in Greece after the paroxysms had commenced.

Grapes and Potatoes Mixing.—A correspondent in Connecticut, in a late letter, says—"In my grape culture I have learned that early potatoes being planted near grapevines, they will mix in their blossoms and spoil the grapes." Can this be so?

Cabbages with Corn.—At an agricultural meeting in Boston recently, Mr. Brooks alluded to the practice of planting cabbage among Indian corn. He knew an instance where cabbage was planted in alternate rows with corn, and the cabbage sold for $150 per acre.

Physalis Viscosa.

Editors Co. Gent.—A few weeks since I noticed a communication in the Country Gentleman, respecting the Ground cherry, *Physalis viscosa*, and can fully endorse all therein said respecting its value, with the exception that I have never known wine made of it.

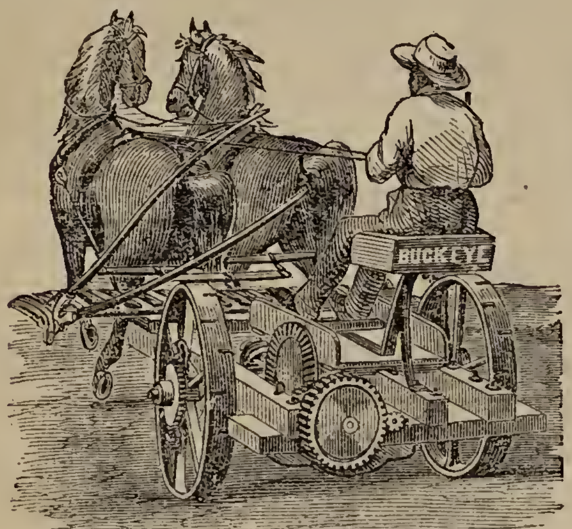
We had them last year in great abundance, gathered during the months of September and October. They grew on a piece of new ground, from which a crop of spring wheat had just been removed. We had brought to the house bushels of that most delicious fruit, after the husk in which they are enclosed is removed. A large quantity was eaten fresh as from the vines; when dried they resemble raisins in taste, and are highly relished when cooked, requiring but little sweetening. I do not know that it has ever been cultivated in Illinois. It grows spontaneously on somewhat newly broken ground in this vicinity. I notice that some one of your correspondents called it the Winter Cherry, which, according to good authority, "Wood's Botany," is another variety—*Physalis Alkekengi*, a native of Southern Europe, and cultivated solely for ornament—fruit acid and somewhat bitter. Julia N. Moss. *Jubilee, Ill.*

HAY AND GRAIN PROTECTORS.

The subscribers have for four years, by extensive correspondence, by practical observation, and by many experiments, endeavored to obtain information that would be a guide to the manufacture of the best *Hay and Grain Covers*, and we now offer the results of these investigations to the public. *We know* that our Protectors are the best ever offered to the community. As to the utility of the covers, we have the testimony of intelligent farmers in every part of our country.

Orders for samples or covers should be forwarded at once.

CHASES & FAY,
May5—weow2tw8tm3t 233 State street, Boston, Mass.



BUCKEYE MOWER,

WITH FOLDING BAR.

Aultman & Miller's Patent.

The subscriber takes pleasure in calling the attention of Farmers to the "BUCKEYE," the most complete and successful Mower ever introduced; combining in the simplest form all the qualities necessary to a perfect Mower. Its frame is supported on *two driving wheels*, either of which is independent of the other. The CUTTER BAR is attached to the frame by a DOUBLE HINGE JOINT, which allows either end, or the whole, to rise or fall, to conform to inequalities of the land. By means of a *lever*, the Cutters can be raised to pass obstructions or over cut grass—in mowing can turn either to right or left—always throws itself out of gear in backing, and backs with the ease of a cart; is light draft, free from side draft; has no weight on the horse's neck; is safe for the driver; almost noiseless in its operation; works well on any land—side-hills or salt meadows; and in any grass, whether lodged or standing, at a slow walk of either horses or oxen.

When not in use, the Cutters can be instantly folded over the front of the frame, and the Mower then driven any distance on the road. This feature belongs exclusively to the Buckeye Mower.

Since its first public exhibition, at the Great National Trial of Harvesting Machines at Syracuse, N. Y., July, 1857, at which it received the HIGHEST AWARD, THE FIRST PREMIUM GRAND GOLD MEDAL AND DIPLOMA, AS THE BEST MOWER, IN COMPETITION WITH *Manny's*, *Ketchum's*, *Hallenbeck's*, *Allen's*, *Burrall's*, *Kirby's*, *Heath's*, and several others, its principles have been fully tested by more than One Thousand Farmers, and without an exception, has received their unanimous approval. During the past season, numerous *First Premiums* were awarded to the "BUCKEYE," including the *New-York and Connecticut State Agricultural Societies.*

THE BUCKEYE HAS NO EQUAL—IT IS THE BEST MOWING MACHINE IN USE.

It is warranted to cut and spread from 10 to 15 acres of grass per day, with a span of horses and a driver, as well as is done by the best mowers with a scythe.

The demand the past season was far beyond our ability to supply, and we trust orders will be forwarded early, to prevent disappointment. ☞ Circulars, with a full description, forwarded on application.

JOHN P. ADRIANCE,
Manufacturer and Proprietor,
No. 165 Greenwich-st., New-York.
EMERY BROS., Agents, Nos. 62 & 64 State-st., Albany, N. Y.
May1—w&mtf

FRUIT CARRIER, OR PATENT

TRANSPORTATION PROTECTOR.

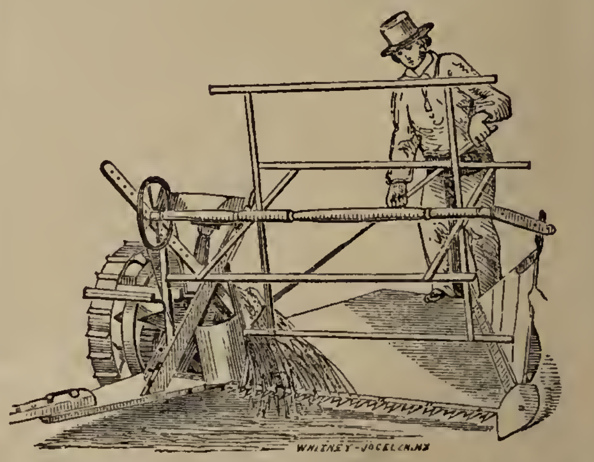
(See Co. Gent., May 21, 1857.)

The price of a Protector containing 32 square one-quart boxes, or 32 of the usual round boxes, is $2 87, deliverable at Winchendon, Mass., where Mr. Wm. Murdoch will furnish extra small boxes at $4 50 per gross for round, or $4.76 per gross for the square ones. For a Protector containing four shallow peck boxes, for peaches, plums, pears &c., the price is $2.10 Orders, addressed to HENRY B. OSGOOD, Whitinsville, Mass., are solicited. ap14w4m2t

MANNY'S COMBINED REAPER AND MOWER,

WITH WOOD'S IMPROVEMENT,

For the Harvest of 1859.



The subscriber begs to inform the public that he continues to manufacture this popular machine, and pledges himself to produce an implement that will fully sustain its former reputation, as the best combined machine yet introduced, and inferior to none, either as a Reaper or Mower.

It has had a steady and increasing popularity from the first achieving a complete success in the first important trial at Geneva in 1852. It carried off the highest honors at the great National Field Trial at Syracuse in 1857; and amidst all the competition and trials of 1858, came out with more and better established points of excellence than ever before.

The general principles peculiar to this machine, and upon which it is constructed, have proved so successful that there has been no attempt to change them.

The main effort during the last year has been to improve its mechanical construction, to make it stronger and more durable, and sustain its reputation as the leading and most acceptable machine to the largest class of farmers in the country.

Warranted capable of cutting from 10 to 15 acres of grass or grain per day, in a workmanlike manner.

Price of Machine as heretofore, varies according to width of cut, and its adaptation in size and strength to different sections of the country, from $125 to $150, delivered here on the cars.

WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

OPPOSITION FARE REDUCED.

MERCHANTS' LINE OF STEAMBOATS,

BETWEEN NEW-YORK AND ALBANY.

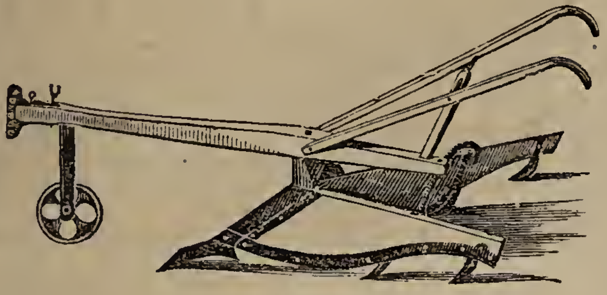
The Steamer KNICKERBOCKER, Capt. W. B. Nelson, leaves the foot of Robinson-st., New-York, every Monday, Wednesday, and Friday, at 6 o'clock, P. M.; the Steamer HERO, Capt. J. W. Hancox, every Tuesday, Thursday, and Sunday. Returning, will leave the Steamboat Landing, Albany, daily, Saturdays excepted, at 7 o'clock P. M.

Travelers will find it to their interest in calling at the Office of the Agents of this company, before engaging passage elsewhere.

Freight carried at reduced rates and forwarded promptly. ELI HUNT, Agent—Office on the Wharf, New-York.
G. W. STEVENS, 282 Broadway, Albany.
March 10, 1859—w&m9ms

Horticultural Books,

Of all kinds, for sale at the Office of the Co. Gentleman.



Farmers, Save your Money!

TRY ONE OF SHARES' PATENT

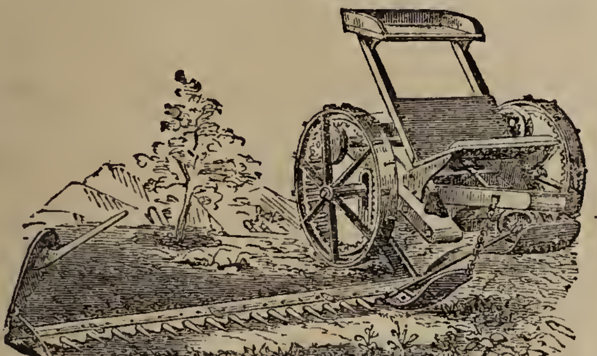
Cultivating, Hoeing and Hilling Machines,

PRICE $10, which will save more than twice its cost the first season, and with ordinary care will last years. It is light and easily used with one horse, and will do more cultivating in going between the rows once, than an ordinary cultivator can do in two or even three times, and will hoe and hill any crops planted in hills (the crooked form of the back part of the wings shape the hills.) or drills fast as a horse can walk, and better than men can do it with hand hoes. Price only $10, and warranted—weight 80 pounds.

Manufactured by PEASE & EGGLESTON,
84 State-st., Albany, N. Y.,
Dealers in all kinds of Agric'al Implements, Seeds, &c.
May12—w8tm2t

WOOD'S MOWER.—

Patented February 22d, 1859.



During the six years I have been engaged in the manufacture of the Manny Combined Reaper and Mower, I have given much thought and attention to the construction of what I foresaw would be a great want of the Farmers—a lighter and cheaper machine expressly for mowing, than had yet been made.

And now, after the most thorough and repeated experiments and tests in every variety of field, and in all kinds and in every condition of grass, I am prepared with entire confidence to offer to the farmers and dealers of the United States, the great *desideratum* in this department of Agricultural labor-saving machines—a Mower, superior in its capacity for good work to any hitherto introduced, of easy draft, light, cheap, and durable.

This machine I now offer as my latest invention, to meet a special want of farmers, and to place within the reach of all, a Mower that for practical working, cheapness and simplicity, will be without a rival.

I build Two-Horse and One-Horse Mowers. The Two-Horse Mower weighs 425 lbs., and cuts a swath four feet wide (or more if specially ordered.) The One-Horse Mower weighs 30 lbs. less, (395 lbs.,) and cuts a swath three and a-half feet wide.

For a more full description of the Mower, reference is made to my Pamphlets, which will be furnished on application. With each machine will be furnished two extra guards, two extra sections, one wrench and oil-can.

Warranted capable of cutting ten acres of grass per day in a workmanlike manner.

Price of Two-Horse Mower,	$80
" One-Horse Mower,	70

Delivered here on the cars.

I continue as heretofore, and with greater success than at any previous time, the manufacture and sale of "Manny's Patent Combined Reaper and Mower with Wood's Improvement." WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

PEASE & EGGLESTON 84 State-St., Albany, Agents for Albany County and vicinity.

POUDRETTE!—POUDRETTE!

Is the very best of all Fertilizers, equal in forcing to guano, and not so dangerous to use, as the seed can come in contact with the Poudrette without burning or killing it. For corn and potatoes, on light soil, it is superior to any manure in use. Price per barrel of 225 lbs., only $2; for 10 barrels or more, $1 75 per bbl. For sale by

PEASE & EGGLESTON,
Dealers in all kinds of Implements, Seeds, &c.,
May19—w4tm1t No. 84 State-st., Albany, N. Y.

NEW AND CHEAP FERTILIZER.—

CASTOR PUMMACE.

A valuable *organic* (vegetable) manure, analyzed by Prof Samuel W. Johnson of Yale College, and commended by him. It is PUMMACE left after pressing the oil from the Castor Seed, and in India and England bears a high value as a fertilizer. It will be sold at $12 to $16 per ton, according to quantity—at which rate it is the cheapest fertilizer in the market. The analysis and remarks of Prof. Johnson will be sent to any address on application; samples of the article may also be obtained if required.

No charge for packages, and in lots of Ten Tons, delivered free of cartage in this city. Manufactured and sold by

H. J. BAKER & BRO.,
Mar24—w8tm3t 142 Water-st., New-York.

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Able and honest men from New-England or New-York. A. W. HARRISON, Philadelphia, Pa. feb.10-6.

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BULL LOCO FOCO, (1778)—calved March 1853—color red with some white. He is in prime condition, and every way a desirable animal. Price $150—cash.

R. HALE,
Ap14—w3tm3t Aurora, Cayuga Co., N. Y.

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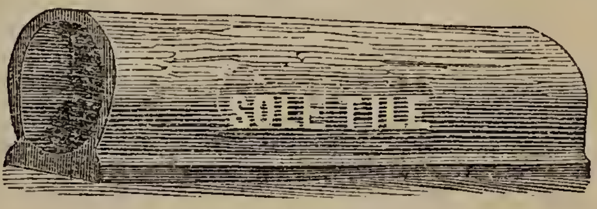
On the Western Plank Road, near the Orphan Asylum, Albany, N. Y.

ALDERSON & JACKSON, Proprietors.

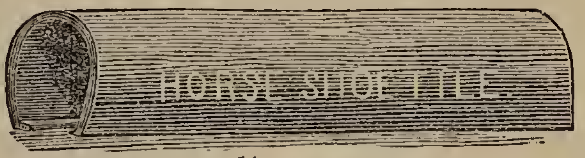
The subscribers are determined to make the best Drain Tile in the United States. Yes, we are determined to make our Tile of pure Yellow Clay, clear of sand or blue clay, and neither gas tar nor coal dust mixed through it, as all those cause the Tile to perish with frost, and they are not so strong. We are determined to make the best Tile ever offered in Albany, and at the following prices:

ROUND TILE—	1¼ inches round,	$9 per 1000
	2¼ inches round,	12 "



CUT 14 INCHES LONG.

2 inches rise,	$10.50 per 1000
3 "	16.00 "
4 "	35.00 "
5 "	55.00 "
6 "	80.00 "



CUT 14 INCHES LONG.

2½ inches rise,	$10.50 per 1000
3½ "	15.00 "
4½ "	18.00 "
5½ "	35.00 "
6½ "	55.00 "
7½ "	75.00 "

Remember our Tile are near 14 inches long. Please give us a call before purchasing elsewhere. Cartage free to docks and railroads.

☞ EMERY BROS., Agents, 62 & 64 State-st., Albany.
Ap7—weow6m2t*.

MYSTERIES OF BEE-KEEPING EXPLAINED,

by M. QUINBY—price $1.00—sent by mail post-paid. For sale by L. TUCKER & SON, Albany.

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BUCK-EYE MOWER!
A. F. MAYHER & CO.,
No. 54 Vesey-Street, New-York,
Now offer to the Farmers,
THE BUCK-EYE MOWING MACHINE,
Which is too well known to need any description from us· The Machine is WARRANTED to work well, or no sale.
Farmers wanting
Mowing, or Mowing and Reaping Machines, Harvesting Tools, Agricultural Implements, Seeds or Fertilizers,
Will find it to their advantage to call at the
New Agricultural Warehouse, Machinery Depot and Seed Store, No. 54 Vesey-st., New.York,
Between Broadway and Greenwich-sts., near the Washington Market and Astor House, north side of the city of New-York. A. F. MAYHER & CO., Proprietors,
No. 54 Vesey-st., New-York.
☞ *Send for Circular. Remember No. 54 Vesey-st.*
May26—w&m tf.

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Also THOROUGH-BRED AYRSHIRES—Flora Gray, Effie, Jessie and Heifer Calf—also young Bulls. Address
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June 1—m1t 45 Fulton-st., New-York.

Fresh Fruits all the Year.
THE YEOMANS' FRUIT BOTTLE, for *utility*, *convenience*, *economy*, and *safety*, is unequalled for preserving fruits in a fresh state in *any climate*, an indefinite time.
"Having used these bottles, we find them exceedingly convenient and just the thing wanted."—John J. Thomas, in Register of Rural Affairs.
For Description and Price Circulars, address proprietor at Walworth, Wayne Co., N. Y.
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FINELY BRED IMPROVED BERKSHIRES for sale, at $5 each, by W. H. CLAY,
South Side, Staten Island.
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FISH GUANO from the Southold Works, in quantities to suit purchasers, put up in barrels, at $25 per ton of 2000 lbs. A. LONGETT,
May26—w4tm3t 34 Cliff-st., New-York.

Farmers should keep their accounts carefully, and know whether each year's operations will make them richer or poorer !
FARM BOOK-KEEPING.—By W. D, Cochran of Detroit. Sets—comprising *Full Instruction* in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully,—also *Day Book* and *Ledger*—for sale at this office—price by mail, post-paid, $2.30. L. TUCKER & SON

Just Published, one vol. 12 mo.—$1.25.
MILCH COWS AND DAIRY FARMING; Comprising the Breeds Breeding, and Management, in Health and Disease, of Dairy and other Stock : the selection of Milch Cows, with a full explanation of Guenon's Method. the Culture of Forage Plants, and the production of Milk, Butter and Cheese : embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland ; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture ; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.
The above valuable work—the best, we have no hesitation in saying. yet issued upon the subject—is for sale at the office of this paper.
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Albany, Dec 2—w&mtf.

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AMERICAN POULTERER'S COMPANION.
A New Edition, Enlarged and Improved. With 120 Illustrations on Wood and Stone.
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THIRD SERIES

To Improve the Soil and the Mind.

VOL. VII. ALBANY, JULY, 1859. NO. VII.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS.
ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

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Composition and Management of Barn-yard Manure.

In our last number we submitted to our readers a greatly condensed abstract of a lengthy report by Dr VOELCKER, of certain very elaborate investigations into the composition of barn-yard manure at several stages of its decomposition, which he made some time ago. The original essay or report abounds in analytical tables and minute details, which, as they could be of little interest or utility to the practical agriculturist, we omitted almost entirely in our abstract, confining ourselves mainly to a brief account of those results and inferences which promised to be of service to the *practical* farmer.

We now bring our synopsis of the more practical portion of Dr. VOELCKER'S masterly essay to a close, by a brief statement of the more prominent and practically interesting points which seem to have been developed in the course of his very minute and elaborate investigations, with a few reflections and suggestions of our own. A retrospective glance over the whole ground furnishes the following:—

1. Perfectly fresh farm-yard manure contains but a small proportion of *free* ammonia, and but a small proportion of *soluble* matters, whether organic or mineral. This condition fully explains the slow action of fresh manure when compared with that of such as is well rotted.

2. Well rotted dung contains, likewise, but little *free* ammonia, but a much larger proportion of ammoniacal salts and compounds, and of soluble organic and saline matters, than fresh manure. This explains the greater availability of rotten manure, and the reason why it produces a more immediate and powerful effect on vegetable growth.

3. The largest proportion of nitrogen in fresh manure, exists in an undeveloped condition, or, as it is sometimes called, as potential ammonia, and is liberated more or less during the process of fermentation, so that it can be assimilated by the growing plants. Thus in the sample analysed, the readily available nitrogen in 100 lbs. of fresh dung, was only .149 of a pound, while about four times as much, or in exact numbers, .494 lb. was found in the insoluble portion of 100 lbs. of the same; while in the manure which had been fermented for six months, the proportion of the former had risen to .297, and that of the insoluble portion had fallen to .309.

4. An examination of the foregoing numbers will show that in *fresh* manure there is upwards of half a pound of nitrogen, or exactly 643 lb., which is equal to .799 of ammonia, in 100 lbs., and a little less, or exactly .606, equal to ammonia .735, in 100 lbs. of that which had been fermented and exposed from November to April. In August the amount of nitrogen was diminished nearly one-third, and in next November, or when the manure was one year old, a little more loss of nitrogen had occurred. The amount of nitrogen will vary much, of course, according to the amount of straw in its composition; the amount of loss from heating or exposure to rains; the amount of nitrogenous matter in the food of the animals; the degree of its wetness or dryness, and several other circumstances. But as the samples examined by Dr V., were of richer composition than the bulk of *ordinary* farm-yard manure heaps, it may be fairly concluded that very little *ordinary* yard manure can contain as much nitrogen as he found, and that even in spring, or before exposure to summer heat and rains, very little will be found to exceed half a pound of nitrogen in 100 pounds of manure, equal to five pounds in 1,000 pounds, or ten pounds in a ton. As nitrogen is the most expensive and most valuable ingredient in the stable and yard manure, and indeed in all kinds, it is of importance in buying and selling manure, and for other purposes, to have some such guide as is presented above, for estimating the amount of this ingredient in a ton or other given quantity. But even with such help there is room for the exercise of much judgment.

As ammonia costs, in the form of Peruvian guano, about 16 cents per pound, and as 10 pounds of nitrogen is equal to a little over 12 pounds of ammonia, it would be not far from exact reality, to call each pound of nitrogen worth about 20 cents. The very best yard manure cannot, therefore, be *fairly* estimated as worth any more than $2 per ton, so far as the nitrogen is concerned, and much of it, from containing less of this most valuable constituent, could not be rated nearly so high. The other ingredients in a ton, including phosphates, carbonaceous matter, potash, &c., might be supplied in other forms at about 20 cents. Very little yard manure can be fairly estimated, therefore, as worth more than $2 per ton, while much of it, from repeated washings by rain, would be estimated beyond the market value of the chief ingredients in other forms, if rated at even $1 per ton.

5. The drainings of dung heaps contain considerable quantities of phosphate of lime, much more than the urine of horse, cow, or hog, and for this reason are more valuable, and ought to be prevented from running to waste.

6. The most effectual means, according to Dr. V., of preventing loss in fertilizing matters, is to carry the manure directly to the field, whenever it can be done.

7. On all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances being wasted, even if not plowed under soon. Fresh, and even well rotted manure, as we have seen, contain very little *free* ammonia; and since active fermentation, and of course the further evolution of free ammonia is stopped, by spreading out the manure on the field, valuable volatile manuring matters cannot escape into the air by adopting this plan. Then, again, as soils with a moderate proportion of clay possess in a remarkable degree the power of absorbing and retaining manuring matters, none of the saline and soluble organic constituents are wasted, even by a heavy fall of rain.

In virtue of these considerations, Dr. V. says he is much inclined to recommend as a *general* rule, to cart the manure on the field, to spread it at once, and to wait a favorable opportunity to plow it in. In the case of clay soils he has no hesitation in saying that the manure may be spread even six months before it is plowed in, without losing any appreciable quantity of fertilizing matters.

8. During the fermentation of dung there is a considerable proportion of the organic matters dissipated into the air, in the form of carbonic acid and other gases; but, *when properly regulated*, the fermentation is not attended with any loss of nitrogen, nor of saline mineral matters.

9. In the interior and heated portions of manure heaps, ammonia is given off; but on passing into the external and cold layers, the free ammonia is absorbed and retained.

10. During the fermentation of dung, ulmic, humic and other organic acids are formed, which fix the ammonia generated in the decomposition of the nitrogenized constituents.

11. Ammonia is not given off from the surface of well compressed dung heaps, but on turning or stirring them it is given off in appreciable quantities. Dung heaps, for this reason, should not be turned or stirred more frequently than is absolutely necessary.

12. Farm-yard manure becomes deteriorated in value when kept in heaps exposed to the weather; the more, the longer it is kept.

13. The loss in fertilizing matters, which is incurred in keeping manure heaps exposed to the weather, is not so much due to the volitilization of ammonia, as to the solution and removal of ammoniacal salts, soluble nitrogenized organic matters, and valuable mineral matters, by rains.

14. If rain is excluded from dung heaps, or if little rain falls at any one time, the loss is trifling; but if much rain falls, and especially if in heavy showers, in a short space of time, a serious loss in ammonia, ammoniacal salts, soluble organic matters, phosphate of lime, and salts of potash, is incurred, and the manure becomes rapidly deteriorated in value, and diminished in quantity.

15. Well rotted manure is more readily affected by the deteriorating influence of rains than fresh manure.

By the investigations which have been under our consideration, chemical science has certainly rendered an important service to the practical agriculturist, and Dr. VOELCKER has certainly placed the farming community under many obligations to him.

Indian Corn—Top-Dressing of Ashes Plaster, etc.

In looking over the mode of cultivation practiced by those most successful in growing the corn crop, and especially the statements of those who have taken premiums for large products of this cereal, we almost invariably find that some fertilizer was applied in the hill before planting, or as a top-dressing after the corn appeared above ground, immediately before or after the first hoeing. The benefits of this course are not unappreciated by thousands who do not compete at fairs, and hence we find the latter practice quite general throughout the Middle and Eastern States. It involves but little labor and a slight expense, and is found to assist the young corn in getting an earlier and stronger start, so that it can forage for itself through a greater depth and breadth of soil.

A handful of ashes thrown around the hill just before hoeing the first time, is one of the most simple and common applications. That it is beneficial, long experience shows, and how any farmer can neglect it for the purpose of selling ashes for eight or ten cents a bushel in cheap calicoes and inferior groceries, is more than we can comprehend. In applying the ashes, if damp, a small paddle or scoop will be found convenient, or a piece of old tin or sheet-iron rolled up funnel-shaped, can be employed, the smaller end serving as a handle. A little practice will enable one to do the work very rapidly, and yet carefully, so as to place the ashes around and not upon the corn, which is injurious, especially if no rain follow immediately.

We have mixed ashes and plaster, one-third of the latter, and thought the application a more effective one —better than either applied alone. It should be remembered, however, that neither ashes or plaster can take the place of manure. The soil must be rich for corn, and there is nothing better to make it so than good barn-yard manure; but these top-dressings are useful, as before remarked, in stimulating the early growth, and thus increasing the strength and hastening the maturity of the plant.

There are various mixtures employed by different farmers, varying in cost and value. Mr. Walrath of St. Lawrence Co., on his State premium farm, uses a composition of six bushels of ashes, one of plaster, one of lime, and half a bushel of salt, with a small quantity of sulphur, pounded bones, &c., mixing all together, and applying a small handfull both before and after hoeing.

The effects are beneficial to this and all other farm crops. Salt alone has been commended as a valuable top-dressing, but it is difficult so to apply it as not to kill the corn—which it will do if it comes in contact with seed or young shoots.

On some soils neither ashes or plaster are thought to produce any beneficial effect. We think these exceptional cases are scarce away from the seaboard, and the vegetable alluvions and prairie soils of the West. We shall gladly give place to experiments throwing further light on the whole quession of top-dressings for corn and other hoed crops.

Cotton-Seed Oil and Oil-Cake.

Within the last quarter of a century how many additions have been made to the resources of agriculturists!—Almost every year, some new invention or some fortunate discovery has afforded fresh gratification to the hopeful, the enterprising, the progress-loving among the fraternity of those whose business and whose pleasure consists in the cultivation of the soil and its products! Within that period, or since the establishment of journals expressly devoted to the improvements and interests of agriculture, how much has been done in the way of improving the various breeds of stock, in the invention of multitudes of improved implements and labor-saving machines, in the discovery and manufacture of various new fertilizers, and in rural economy and farm management generally!

Among these recent improvements and additions to our agricultural resources, that of the manufacture of oil and oil-cake from the seeds of the cotton-plant, promises to prove one of the most valuable. It furnishes a new source of income and profit to the cotton-planter, while at the same time it makes an addition to the materials of which those who raise or fatten stock may avail themselves with advantage. When corn is scarce or high-priced, this substitute for the feeding and fattening of cattle, may be more highly appreciated than it has ever hitherto been.

But a few years ago cotton-seed was almost entirely valueless, being seldom employed for any valuable purpose beyond the little that was used for planting the annual crop. In some cases it was fed to cows and cattle, but more generally it was allowed to go to waste, or was added to the manure heap. Now the demand for it is quite considerable, both the oil and the oil-cake derived from it having been found of much value. In the Patent Office Report for 1856, the Consul of the United States at Alexandria, Egypt, reports in reference to the cotton crop of that country, that "a demand has recently sprung up in England for the cotton-seed, for the manufacture of oil and oil-cake, and all that can be spared is readily disposed of at the rate of 30 cents a bushel."

The demand for, and use of cotton-seed and oil-cake was much restricted for several years, in consequence of doubts about the safety of using either for feeding; on account of the husks and short fibres of cotton which adhered to the seeds being thought to be indigestible, or positively deleterious, by causing obstructions in the animals fed on it.

This objection to the feeding of cotton seed and oil-cake, has been recently obviated by the invention of several machines for the decortication of the seeds. As this separation of the husks and adhering fibres, will doubtless lead to an increase in the use of the seeds and the cake, there must be not a few to whom any reliable information in regard to the qualities and merits of this new feeding material may be both acceptable and useful. For this reason, and with this hope, we submit the following facts and statements:

1. Cattle eat the seeds, even with the husks unremoved, with great avidity. Decorticated seeds will most probably be eaten with still greater relish.

2. Experiments made two years ago, and reported to the Royal Ag. Society of England, show that common (undecorticated) cotton-seed cake is worth about £8 10s. per ton, when linseed cake is sold at or about £14 10s., or in other words, that they bear about that proportion for feeding purposes.

3. The new or decorticated cotton cakes have recently been analysed by Prof. Voelcker, the chemist of the Royal Ag. Society, and have been pronounced by him superior in nutritive properties to any sample of cotton cake which he had previously examined. The two samples of this *new* kind of cake analysed by Dr. Voelcker, were found "extremely rich in flesh forming principles, as well as in oil and fatty matters. Indeed both specimens of cotton cake contained a great deal more of these valuable constituents than the best linseed cake, and ought to be according to the analysis, more valuable as a feeding stuff than linseed cake." Dr. V. suggests, however, that the analytical results obtained in the examination of feeding stuffs, like oil-cake, are insufficient of themselves to determine their relative practical feeding value. Various circumstances may affect the value in practice which could not be determined by analysis. For example, the oil in cotton cake may not be so easily assimilated as the fatty matters in linseed cake, or it may not agree with the constitution of animals, or it may contain something not detected by analysis, which may affect its practical utility. Nothing short indeed of actual feeding experiments, as Dr. V. suggests, "will suffice to ascertain in a satisfactory manner, the comparative value of this cotton cake and linseed cake." He is inclined to believe however, that the decorticated cake will prove much superior to that formerly in use, (viz., that made from seeds with the husks unremoved,) and also an economical substitute for the much more expensive linseed cake.

The following is the composition of the two samples of decorticated cotton seed cake, analysed by Dr. Voelcker:

	No. 1.	No. 2.
Moisture,	8.27	7.67
Oil and fatty matters,	19.19	14.93
Mucilage, gum and sugar,	12.25	14.47
Protein compounds,* (flesh-forming principles,)	46.62	43.21
Pure cellular fibre, (woody fibre,)	10.22	11.45
Inorganic matters, (ash,)	7.45	8.27
	100.00	100.00

From this analysis it will be readily seen, by those who have given any attention to the chemical composition of the various fodders or feeding substances commonly used, that this new kind of cotton cake (decorticated) is richer in protein compounds containing nitrogen than linseed cake, the amount of nitrogen in the latter being set down usually at from 5.20 to 6.00 per centum. The value, therefore, of this new kind of oil-cake ought to be as great, if not a little greater than that of linseed, for the purpose of feeding and fattening cattle. The manure of animals fed upon it, will also be equally or more rich in that element for which we have to pay at the rate of 16 cents per lb., and sometimes a great deal more in all marketable manures.

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* Containing nitrogen: No 1, 6.82; No. 2, 6.91.

Depth of Plowing.

A good deal of discussion has been had upon the proper depth of plowing for different soils and crops, but the question seems as far from being settled as ever. Those who advocate uniform deep plowing may not be far from right, if the soil is first fitted as it should be for the operation. As long as the soil turned up is suitable for growing good crops, we may send the plow "down to the beam" with advantage, but a cold, lifeless soil, containing elements injurious rather than beneficial to growing vegetation, cannot profitably be brought to the surface for that purpose.

There can be little question however, that a deep fertile soil will produce much the largest and best crops. There must be room for the roots to go down beyond the reach of drouth, and to find appropriate food for their use, and this is most largely present in a deep, mellow soil. If a soil is shallow, it is also usually wet, and the presence of water is almost invariably the cause of its shallowness. Let it be underdrained in a thorough manner, and it soon loses this wet, shallow character, and may then be plowed, deepened and manured, until it becomes deep and fertile, and fitted for growing profitable crops.

Sandy soils do not often acquire a very fertile character, because they are too light and porous to hold manure. Not needing to be made more loose and friable, they do not need deep plowing, but rather a course of treatment which will tend to consolidate both soil and subsoil. Our present remarks refer moro particularly to loams and clayey soils

If, then, we underdrain our wet soils, we may soon give them the deep plowing requisite to large productiveness. If we relieve them of all stagnant water, the cold, lifeless undersoil, will soon become a warm, quick soil, fitted to receive and retain manures—fitted, in short, for thorough and profitable culture in different farm crops. The only questions then, in regard to the depth of plowing, will be—what depth of soil does the crop we intend growing require, and how deep shall we turn under green-sward or barn manures to get from their decomposition the best growth of crops?

These questions we may again take up—whether we do or no, they are open for discussion by our readers, and we shall gladly give space to all well considered articles on the subject

Culture of Buckwheat.

This is an important crop, and we present a few hints in regard to its cultivation and uses, for the consideration of our readers. The time of sowing varies with the season and place, but from the 20th of June to the 4th of July is regarded as the best and most proper season; but we have known good crops from that sown on the 12th July. If sown too early it is liable to blast, and if too late, is apt to be hurt by frost. The land best adapted to this crop is a light loam, and it is also a good crop to subdue and ameliorate newly cleared or recently drained land. The general practice among farmers has been, to sow buckwheat on their poorest land, when there is no crop in fact, which will better pay for liberal and generous manuring. The quantity of seed per acre should receive due attention. It is a crop that spreads very much, and therefore less seed is just as good as more. From repeated trials, we have found that half a bushel is amply sufficient for an acre of ground—and this, if sown evenly over that surface, will give as many stalks as can comfortably grow; for if a larger quantity were sown, the growth of straw would be so abundant that it would lodge down, and thus would not fill so heavily, or ripen so evenly. After being cut it should lay for a number of days upon the ground, and if out in two or three showers no damage is done, if it be turned over so as to dry off. When hauled into the barn it should be thrashed immediately, as at that time it shells out more readily, and it can as well be done then, and it is out of the way. The average yield is from twenty to twenty-five bushels per acre, although some accounts of the yield of this crop seem almost fabulous—one of which occurs to us at writing—that of Mr. **Samuel Allen** of Benton, Yates Co., who in 1855 raised one hundred and twenty-seven bushels from one bushel sowing, on about two and a half acres.

The seed is valuable for food to both man and beast, and the straw, if cut before being killed by frost, is a most excellent fodder for sheep, they being particularly fond of it. It seems that this crop should receive more attention from our farmers, as its merits certainly demand.

Southern Wheat at the North.

Near Geneva, 27th May, 1859.

Messrs. Editors—I believe I wrote to you some time ago, that the Hon. H. L. **Brown** of Fayette, Missouri, was kind enough to send me a bushel of wheat—I believe it is called tho Early May Wheat. I had intended to watch and note the day of the month it came, or rather began to come in ear, but was surprised yesterday to find it nearly in full ear. Unless the midge makes its appearance earlier than usual, this wheat must escape its ravages. The Mediterranean Wheat is beginning to show a few ears, and will probably be in full ear in all next week; but much of that wheat will have too much straw unless the weather keep dry. We had a good shower yesterday, and a little to-day, but we need a great deal more rain for the barley and oats. Corn is coming up, but some have not got their corn ground plowed, owing to the drouth; they will get a chance now, but we have not had rain enough to make heavy land plow as it ought to. Clover must be a light crop. This rain will help it a little, but it is beginning to blossom, and it never grows much after that. **John Johnston.**

Cheap Salt for Manure.

Syracuse, May 28, 1859.

L. **Tucker**, Esq.—I wish to give information through the medium of the **Country Gentleman**, to farmers and others disposed to make use of salt, by way of experiment, as a fertilizer, that salt of an inferior quality, (as valuable as any other, however, for agricultural purposes,) can now be obtained at the works in Syracuse, in any quantity equal to the probable demand, and at a very low figure. It can be had for, say, 75 cents per barrel of five bushels, or for not to exceed 11 cents per bushel, shipped loose in boats. When wanted in any considerable amount, say twenty-five barrels, or upwards, for agricultural or experimental objects, it will afford me great pleasure to attend to any orders for the same, gratuitously, so far as my personal services are concerned. I am one of those who believe in the value of salt as a top-dressing for grain and other crops, and feel as though I should be rendering a public service by facilitating any trials of its efficacy in that respect, within my power. Very truly, yours, &c., V. W. **Smith**, *Supt. Onon. Salt Springs.*

Road-Making and Repairing.

June is probably the most favorable month for "working out" the road tax, (we speak of "York State,") and is the one most most generally chosen by our country "pathmasters." That our system of doing the work is an imperfect one—expensive and incapable—is very generally admitted; yet it is established and unlikely to be changed, so we will present a few hints on the method of expending to the greatest public benefit, present and prospective, the labor assessed to our "tax-paying" readers.

In laying out roads in this country, we have been confined too closely to section lines, regardless of the inequalities of the surface. "The longest way around is the shortest way home," when we pass over instead of going around hills or deep valleys. No unnecessary curves should be allowed, but a good road may wind along to keep the level, very often without increasing its length. Experiment shows that the load which a given force will draw on a level, will require nearly *four* times that power to draw it up a rise of one foot in a hundred. Hence it has been established as a rule in road-making, that the length of a road may be increased twenty times the perpendicular hight to be avoided, with true economy in the result.

Most of our roads are already established, but we often see changes of route to straighten some curve of those laid out before the country became much settled; and almost invariably these changes are in defiance of the above principles, and are no real improvement save in bringing our farms into better form for the plow. It would oftener place like qualities of soil in the same field, to curve around the base of a hill, and we may descend into the valley only to find a slough at the bottom, and another hill to climb on the other side. The *pleasant* road

> "Doth follow
> The river's course, the valley's playful windings,
> Curves around the corn-field and the hill of vines."

But to road-making and repairing, as we proposed in taking up the pen.

The great difference between our good roads and our bad ones, lies in the fact of their perfect or imperfect drainage. It is impossible for a good road to exist where water stands and stagnates, and where the rain that falls can pass off by evaporation only. It must have ditches at each side, and these must be to lead away and not to *hold* the water, or the road-bed will soak up more or less moisture by capillary attraction, and thus remain rutted and muddy. Even on side-hills, if water remains on the upper side, it will injure the road by passing under. We must provide, as far as possible, for the thorough drainage of the road-bed either by surface or covered ditches. An underdrain directly beneath the track, would probably furnish the most economical foundation for an always dry and hence always good road.

In making or repairing a turnpike, gravel and sandy loam are the best, and the surface soil—often mere muck—the worst material that can be employed. Better leave a road untouched, than to scrape from each side a narrow track of sods, which will always become rutted and muddy in long rains, and almost impassable in the spring and fall, and when unfrozen in winter. A few inches of gravel, and an open ditch along each side to carry off the water, would be of far greater benefit, and often less expensive.

On a naturally dry soil frequently no turnpike is needed. Let the loose stones be removed, the hollows filled up, and a few drains be provided, and the road will remain in a better state than if thrown up in the usual manner. Often the great necessity of the road is a simple ditch to keep off the water from the hill above, yet not unfrequently ten times the labor is expended in turnpiking, while this want remains imperfectly supplied.

In filling ruts, large stones should never be employed, for however deeply placed they are very certain to work up to the surface. Let them be broken finely, and they will become fixed facts, and the holes which they fill will become permanently mended. No loose or projecting stone should be allowed to remain in the roadway at any season. The damage they occasion to teams and vehicles is often equal to the whole "wear and tear" beside.

The leveling scraper is now in general use in many road districts. They should be put in requisition still more frequently—as often, at least, as the roads become rutted and uneven—and in many places, little more will be found necessary. On the whole, we are of the opinion that it will be found more profitable to employ the greater share of the labor assessed, in permanent improvements like draining and graveling a portion of the road thoroughly each year, than in doing "here a little and there a little," to but small purpose or benefit throughout the district.

Corn—Culture and Hoeing.

Clean culture and frequent stirring of the soil in the early stages of its growth, are indispensable requisites to large crops of Indian corn. Of soils and their preparation, of the seed and its planting, of top-dressing, and other cognate topics, we have already had "our say." The hoe—hand and horse—must do what remains to be done until harvesting, when we hope to offer some further remarks on this favorite topic. At present, we would recall some thoughts on hoeing corn.

First, a word about hoes. Proably the Indians knew something about the culture of *Indian* corn. They used a rudely constructed hoe, and practiced clean and frequent culture. Historians say they also hilled their corn—and made the hills as high as they could pile them. Yankee corn-growers find this useless work; but they cannot by any course of theory or experiment, show it to be an unsafe rule to "allow no weeds to grow among the corn." We were only intending however, to speak of what hoes had been, and what they should be. Within our recollection, they have been comparatively rude, heavy implements, which it were almost a day's work to carry, to say nothing of using. Now, we have little right to complain on that score. Good hoes can be had, with a light well-tempered blade, and a long springy handle, which will enable the possessor of a moderate backbone, to "hoe his row" with the best of the gang.

The use of the horse-hoe, or cultivator, is a pre-requisite to that of the hand implement, and a good one is indeed a great labor-saving invention. With straight rows and a mellow soil, the culture can be very nearly accomplished—the hills only need a brush or two with the hoe to finish the work. With a steady and "knowing" horse, who will "haw" or "gee" at the word, or is quick to slight pulls on the rein, and who can *see* corn hills for himself, one can stir the whole surface between the rows, by passing back and forth each way, with proper care. A good horse-hoe will be so arranged as to turn the soil from the hills when first used, so as not to cover the young corn, and to turn it towards them when it becomes large, so as to cover up any small weeds among the stalks.

We have recently seen some statements of the advantage of performing the whole culture of Indian corn with the hoe. It may do on very mellow soils, but will be thought too slow by the majority of farmers. Besides corn soils are not generally sufficiently mellow without the use of the horse implement. Their use while the corn is small, cannot much affect the roots of the same, and when the corn becomes sufficiently large to shade the ground, the weeds may be kept down with small labor properly applied. We should sooner attempt to rely upon horse-hoeing entirely, than to depend upon hand-hoeing outside our garden patch.

The culture of corn should begin as soon as possible. Weeds with a single root, as all have when they first appear above ground, are readily destroyed; but when they become large, we must not only cut them up, but bury them beneath or dry them upon the surface of the soil. In moist weather we have found their destruction impossible, because delayed a week, when if taken earlier, the work would have been a very slight and certain one.

There is a philosophy in using the hoe, as well as in many other common employments or operations. We must take up the implement "with an object in view," and that object we have stated to be, to *mellow the soil and kill the weeds* Many scrape away a little of the surface soil around the plants, and haul up a little mellow earth to hide the weeds, not to *kill* them, as we should do. Let us strike the hoe well in, each side of the hill, and draw it to us so as to mellow the soil two inches deep. Do this two or two three times, each side of the hill, and then smooth it off to suit the fancy, and both these objects (mellowing the soil and killing the weeds,) will be accomplished. The horse-hoe ought to have done the rest.

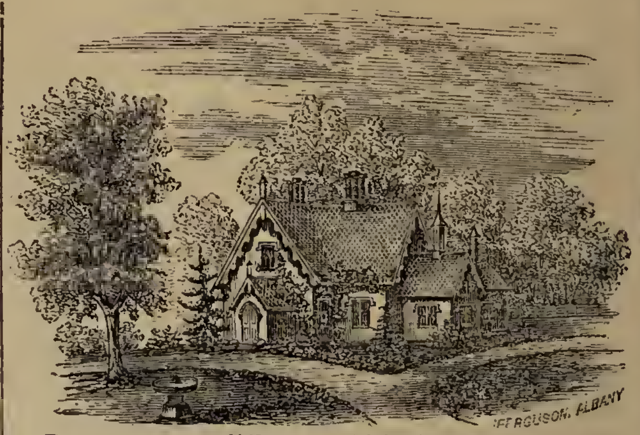
"How many times shall we hoe?" may be asked. As often, we answer, as is requisite to accomplish the objects above stated. *Clean culture* should be the rule —and it should be kept, even if "more help" had to be employed, as in haying and harvest. Hoeing thoroughly finishes what manuring, and full preparation begins, and fills out the promise of a crop.

Hints on Building in the Country.

To a person about constructing country dwellings with their necessary adjuncts, a wide range of style is offered for the selection of an appropriate design, appropriate to the scenery of the estate, to the habits and occupations of the man, and to the section of country in which it is to be built.

Old prejudices have been surmounted—the *Sugar Box* and *Grecian Temple* styles have long since fallen into bad repute, and now we have modifications of the Gothic, Italian, Swiss, and Grecian, well adapted to the country and climate.

In this particular alone—Style—great improvement has been made in our country within a few years, and this improvement is still going on with increased vigor every season. Passing through our suburban villages, beautiful villas and cottages now greet our eye at every turn. Like an epidemic, one catches the building fever from his neighbor, and the prevailing desire at present seems to be, to have the prettiest and most to be admired home.



But one great difficulty which deters many from building, is embodied in the almost stereotyped phrase: "No person can build a house for the cost as estimated by the architect or carpenter before commencement." Very unfortunately this is true to a great extent; but what is the reason? Easily enough explained in one word—alteration. Mr. Smith wants a house built—an estimate is made by the carpenter, the house is begun and progresses finely, when all of a sudden Mr. Smith says, "Stop, I want this door altered into a window, this room made larger, and instead of having a portico over the front door, I think I'll have a piazza all around the house,"—and so he alters a little here and a little there. The carpenter is very willing of course, and very faithfully notes every *extra* on his bill; but does Mr. Smith very faithfully note every extra on *his* memorandum? I am afraid not, and when the bill is presented, amounting to two or three thousand dollars more than the estimate, Mr. Smith raves and says, "I knew it would be just so; this house-building is an infernal shave—catch me in it again if you can;" blames the carpenter for not "sticking to his price," and perhaps charges the poor fellow with being dishonest, when all the while the fault lies at his own door.

Now to remedy this evil is the very object I am aiming at. This is why I am advising you to sit down this winter with your architect, and freely and fully discuss every item of design and plan. Get everything perfected and entirely satisfactory, and when Spring comes go straightway to your carpenter with the drawings, and ask him for what price he will build you a house after those designs. Once having got his estimate, say not a word to him until your dwelling is completed, and you are ready to take possession. Then you will have reason to thank him for the success and me for the suggestion of the idea.

With these remarks we present a design for a cottage villa of the rural gothic style, as, in our judgment, this style offers more variety, better harmonises with the generality of American scenery, and is destined to be the favorite with us, having in it the rudiments and foundation of a new *American* style.*

The plan comprises: Parlor, 15 by 18; hall, 9 by 20; dining-room, 15 by 18; bedroom, 12 by 14; kitchen, 14 by 16; store-room, 7 by 9; scullery of the same size, and several closets on the first floor.

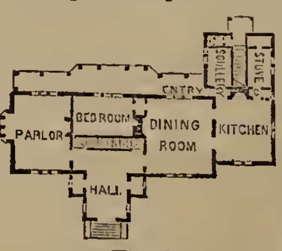


Fig. 2.

The second floor contains four chambers, with closets and dressing-rooms.

The cottage is designed to be built of stone, with the ornamental details of wood painted a brown freestone color. The roof projects 3 feet, and the gables are ornamented with verge-boards cut from 3-inch plank.

The chimney tops are of Terra Cotta.

Cost in New-England about $3,500, if finished throughout in a plain, simple, but thorough manner. G. E. Harney. *Lynn, Mass.*

Advantages of Under-Drainage—II.

In a former number something was said on the above named topic, but it was not exhausted, and the importance of the subject may justify farther remarks. I add then that *drainage prevents coldness in soils.*

Not, of course, that drained soils never become cold, but they often *remain* cold by reason of an excess of moisture. I will illustrate this. You place over the fire a vessel of water, and apply the requisite degree of heat, and presently it will boil. But any degree of heat you may apply will not increase its heat above boiling point, because the excess of heat is carried off by the vapor which escapes. You now understand that vapor takes with it a certain amount of heat whenever it rises from water. If therefore, your land be wet, the evaporation of the water which it contains will carry off the heat, which would otherwise impart its quickening influence to the young crops.

But are you alarmed lest your land suffer from drought in case it be drained? Entertain no fears from this source, for I propose to show you that "*thorough drainage" will enable wet land to withstand drought far better than it could without drainage.*

"Well, this is a singular proposition," you say. "First, drainage will dry our lands, then it will keep them moist when they need moisture most. A curious curious doctrine this."

It is a little curious I admit, but nevertheless it is true. And I desire to explain *how* it is.

You understand how drainage deepens the soil. This was explained to you in the former number, also how hard, clayey soils slack and become fine when the water is removed from them.

Now you have drained your land, and the hard subsoil has crumbled into small particles, so as to admit the air freely to circulate among them. This air contains a certain amount of vapor, and with this vapor it parts as it comes in contact with other bodies. In certain cases you see that this is the case. For instance, stones lying on the surface of the earth, "sweat," as the boys say, and this too in very hot, dry weather, and under the direct influence of solar heat. Now this "sweat," as it is called, is only the condensed vapor of the atmosphere coming in contact with a substance colder than itself. The same thing is illustrated in another way. During a hot day of summer you fill a tumbler with ice water, and after standing it in your room for a short time, you notice that the outer surface of the tumbler is covered with drops of water The tumbler "sweats." How is this? The water from within did not penetrate the glass, and filter through, for glass is impervious to water; but the tumbler being colder than the surrounding atmosphere, condensed the vapor which it contained, and which came in contact therewith, and the same result followed as in case of the cold stone. Now open the pores of your soil to the air, and that air carries with it moisture, even in the drought of summer.

Besides, porous light soils drink in more dew than hard, impervious ones. Hence your drained lands are more benefited by the moisture thrown back on the earth during the night, than are lands not thus improved.

Drainage is conducive to health. This may not be the case in all localities, but in some it is manifestly so.

In regard to the diseases prevalent among the laboring classes in certain districts of England, we have medical testimony to the following effect. Districts where fever and ague had for years been prevalent, were almost entirely free from it after drainage was adopted. At the same time we were assured "that the fatility of disease, or the comparative number of deaths from severe ailments, was diminished about one-half."

It ought to be remarked also that the diminution of diseases in the vegetable kingdom has been observed to attend draining. I shall not dwell on this branch of the subject farther than to suggest that such might be expected to be the case, from the known changes which it produces on the atmosphere is equal, to some extent, to a change of climate.

The advantages of under drainage then are neither few nor small, inasmuch as it removes from the soil stagnant and superfluous water, deepens its fertilization, renders it more friable, prepares it to respond more readily to the use of manures, opens the soil for the circulation of air around the roots of plants, prevents the freezing out of both grass and grain roots, lengthens the seasons, produces favorable changes on climate, guards against drought and prevents or modifies certain classes of diseases both among men and vegetables. Have we not then an accumulation of advantages which will justify very decided action? R.

Specific for Bugs on Vines.

Having seen by your paper that many truckers in your section are anxious to ascertain a simple and sure remedy to destroy bugs on squashes, cucumbers, and the like, I will give you one which is almost a specific, and within the reach of every one, especially those living on the seaboard.

Procure fresh fish—of any kind whatever, the commonest and cheapest just as good—a sufficient quantity accor ing to circumstances, say one peck to a barrel of water. Let them stand therein a day or two, in order to commence decomposition and emit their *necessarily unpleasant* odor; then remove the barrel to your patch, and with a watering pot go over your whole patch, just dampening the leaves.

In addition to driving away the bugs, your plants will become green and healthy, and soon grow beyond the reach of any future swarm of depradators. It may be necessary to use the water two or three times in the course of two weeks, but remember that every application is equivalent to a dressing of manure, which will amply repay for the labor, which is very trifling. Fresh fish offal is of equal value with the fish. V. B. B.

Out-Door Whitewash.

A house-painter on Long-Island, says the *Am. Agriculturist*, gives the following recipe for making out-door whitewash: Take unslaked lime and put it in a bucket, with about as much water as will be required in use. Then throw in about half a pound of tallow or lard for a peck of lime. As the lime slakes, the heat will melt the tallow, when it is to be thoroughly stirred in—the stirrings to be repeated frequently during use, if any grease rises to the surface. This washes off less readily than any other kind he has tried, and is at once cheap and readily available.

Gas Tar.

The value of gas tar judiciously applied for the prevention of insect attacks on fruits and vegetables has been admitted for years. Like many other valuable applications, many persons used it without skill, and being of a very caustic nature, injured their trees. Experience has shown a safe method of applying it, which is recommended by many skillful cultivators who have tried it. The plan is to smear rags with the tar, and hang them in the branches of trees likely to be infested with the curculio. We are assured that this has checked their depredations on the plum crop to a sensible extent this season. Gas tar is also successfully employed on other vegetables to chase off insects, as its odor is very offensive to them. A correspondent has kindly offered to furnish his method of applying it to squashes, cucumbers, &c.

Soft-shelled Eggs.

Your correspondent wishes a remedy for the soft-shell egg producing propensity of the turkey he has. I had a very fine hen that was similarly constituted. I regarded it as owing to disease, and not to the lack of any particular food required to remove the cause. I fed her one tablespoonful of linseed oil three times a day, feeding very sparingly for about a week, after which she laid eggs perfectly healthy. I might philosophise upon the action, but deem it unnecessary. R. W.

French's Treatise on Farm Drainage.

We have already given a brief notice of this very useful book, but a more extended notice is perhaps due to the work and to our readers. No treatise of the kind, published in this country, contains nearly so much valuable information on the subject of drainage, and especially such as farmers wish to apply directly in practice. The principal heads under which this information is given, are historical notices—rain and evaporation—drainage of high lands—modes of operating, including drainage with tile—depth—modes of laying out drains—distance asunder—outlots, wells and traps—position, size and junction—tile machines—cost—implements—effects—drainage of cellars—draining swamps—legislation as affecting drainage, and drainage legislation—draining stiff clays—obstructions, &c. Under these different heads we are furnished with a great amount of interesting and valuable facts.

The chief defect of the work, and the few errors which it contains, result from the same cause that renders too many good American books defective, namely, hasty preparation. Few men can supply a complete practical treatise on any subject who have not spent at least a large portion of a life-time in testing all its statements. Yet it appears that the author, at the time of writing, had only three years experience in the use of tiles for drainage, although they are regarded generally as the foundation of all successful results. He seems to have fallen into some singular mistakes in relation to their first introduction, remarking on p. 47, "We cannot learn that *cylindrical pipes* have ever been manufactured in this country till the summer of 1858, when the engineers of the New-York Central Park procured them to be made," &c. The same remark is repeated elsewhere. We have known several manufacturers who have for the last ten years confined their operation almost exclusively to the pipe-tile; in our own experiments, extending back many years, we have never laid any other; and some of the experiments which he quotes as having proved so successful in New-York, were actually performed nearly ten years ago with pipe-tile. Such a mistake as this is hardly excusable in one who takes the position of a general teacher on the subject. In relation to the pressure of water in soils against the tile, he quotes from a British writer who says: "The pressure due to a head of water of four or five feet, may be imagined from the force with which water will come through the crevices of a hatch, with that depth of water above it. Now, there is the same pressure of water to enter the vacuum in the pipe drain, as there is against the hatches, supposing the land to be full to the surface." Although the author seems to express some doubts of this statement in a general way, he makes no allusion to the counteracting force of capillary attraction which must constantly vary with the fineness of the particles of the soil, as well as with the quantity of water held by it. If, for example, there were nothing but loose stones above the tile, the pressure of water in their crevices would be precisely the same as an equal head of clear water. As the crevices become smaller, the pressure would constantly diminish until the soil would assume the character of a sponge, and hold a large portion of water without any pressure whatever. The *quantity* of water contained in the soil would also constantly affect the result. When at first deluged with heavy rains, the pressure would be formidable; but this pressure would constantly diminish with the quantity, until the weight of the water would be equal to the capillary force, when it would cease to run.

In another place, the author gives the natural slope of banks of earth as varying from 21° to 55° with the horizon, and adds that the natural slope of "common earth" is 33° 42',—a degree of precision wholly chimerical, with so wide a generic appellation, the variation in "common earth" being at least some degrees, instead of being brought down to the sixtieth part of a degree. A want of precision, again, occurs in giving the proper size of tile on p. 159, where we are told that *two-inch pipe*, with 50 feet distance asunder, for loose soils, and less for compact soils, is enough. The length of the drain, as controlling the size of the pipe, a most important consideration, is entirely omitted. If, for example, a two-inch pipe will carry off while running full the surplus water of an acre in 48 hours, then such a drain for each 50 feet, and 53 rods long, would become full in a wet time. If longer, the pipe must therefore be larger, or else pass into a larger main pipe. With regard to the *depth* of ditches, he shows clearly that in many soils it will cost at least twice as much to cut ditches four feet deep as to a depth of three feet. Yet he advocates the former depth in all practical cases. Three feet drainage will usually cost $25 to $30 per acre; four feet drainage would therefore become nearly impracticable, if $50 or $60 per acre were required. There is no doubt that a four foot drain is generally much better than one extending downward only three feet. But in many instances the latter will answer every desired purpose; and if in a strong adhesive soil, be safer than a four-foot drain in a porous soil. The objection to a shallow drain is the liability of the surface water to pass turbid into the pipe, and when this is the case, it must deposit more or less sediment, and after a lapse of years become choked. A well constructed drain in a strong subsoil, three feet depth, can scarcely ever receive any water that has not been rendered clear by filtering downwards. In porous gravel or sand, the result may often be different. Our author does not even allude to the mode, published in detail in this paper last year, of reducing the expense of cutting ditches more than one-half by a ditching-plow, altough he must have seen the article as he copies two of its cuts. In speaking of brush drains, he states that the "but-end should be laid *up-stream*," a singular mistake, as this would tend to obstruct the current, by throwing the water backwards as it descends down through the branches.

He quotes largely from many English works, and from Prof. Mapes in this country; and in this way furnishes much valuable matter. But authors do not always agree; and hence there appears some occasional obscurity where the compiler cannot distinctly point out the truth from his own experience. An instance of this want of clearness occurs where he speaks of oblique drains. On p. 149, he says, "Upon the best view the writer has been able to take of the two systems as to the distinction of drains, there is but a very small advantage in theory in favor of either over the other, in soil which is homogeneous." On the next page he gives reasons why draining in the line of the greatest fall is best, "applicable to all lands alike." This apparent discrepancy may be explained, but ordinary readers will be confused. The chapter on "rain and evaporation," presents a condensed assemblage of facts not equalled for value and extent in any other work we know of; yet these facts would be more valuable if more point and practical direction were given to them.

The author writes with a vigorous and spirited style, when not compiling from others, and he cannot withhold a joke when it appears to the point. He hits clergymen and physicians, but is very careful of lawyers, of whom he is one. On the whole the book is a very interesting one, and with the exception of the few defects we have pointed out, an admirable performance considering the time occupied in its preparation. We advise every one who wishes all the information to be had in relation to drainage, to procure this as the best contribution from the American press on the subject.

Tillage of Heavy Clays—Subsoiling.

In a recent brief article on the "Depth of Plowing," (Co. Gent., June 9, 1859,) we spoke of the importance of first fitting shallow soils by underdraining for profitable culture – commending that process as the best means of loosening and improving lands of this character. There are some clays, however, so heavy and impervious to water, that the drains would need to be very near each other to be effective, and hence would be attended with large expense. A writer in the *Rural New-Yorker* —Z. B. Choate of Canada West—gives us some very sensible hints on the tillage of such soils, which we condense below for our readers.

His soil is such, he says, "that if you scrape out a hole below plow depth, the water will stand as in a bowl,"—something like that which John Johnston of Seneca Co., visited some years ago near Niagara Falls, being consulted in regard to its drainage, and which (as he told the writer on his way back,) was so different from anything in his experience, that he could advise nothing in the matter. The water was all on the surface after heavy rains—the subsoil seeming totally impervious to its admission. But to return to Mr. C. on the tillage of such a soil, and the reasons for the course he recommends.

If, says he in substance, you till heavy clay until it is as free as you could desire, at the first rain it becomes saturated down plow depth; in a few days of hot sun and drying wind, it becomes baked as hard as before plowing, and any crop sown on it finds it difficult to make its way above ground—and when it does come up has a poor appearance. Suppose this land plowed five inches deep, it is plain that a rain sufficient to saturate and make mud of this soil, would have less effect upon one plowed eight or nine inches, which is considered a good depth; neither would it dry out so quickly, or become so hard as in the first case. But we frequently have rains that fill the ground to that depth even, preventing all work upon the land for some time, until it slowly dries again. To remedy this, we must use the *subsoil plow*, and by running that so as to break the hard soil six or seven inches below plow depth, allow the water to descend so much deeper and give it a better chance to drain away at the bottom. Then the rain that would fill the soil plowed to the depth of eight or nine inches, thereby rendering it unfit to work upon, would hardly affect it at all.

In regard to the benefits of subsoiling as a preventive of the effects of drouth, we copy his remarks in full:

"Another advantage obtained from deep plowing in clay soil, is found in localities subject to severe drouths, as is the case with us. It will be found if you plow land shallow, evaporation goes on rapidly in hot weather, and in a few days, at most, after a rain the soil is as dry as before. But on the other hand, if the land be subsoiled, it gives the water a chance to go down in the cool ground below; and we know it must take much longer for moisture to evaporate at fifteen inches below the surface than it would at five—and by its thus evaporating gradually, it leaves the land soft and moist for a much longer period. In fact, you may till a fallow on clay in ever so dry a season, if it be subsoiled, and you will always find it soft and moist, and grain when sown on it will come up rapidly. Some may think the labor and expense attendant on such a course will amount to more than the profit derived from it, but remember that, although it takes strong teams at first, you have it to do but once, for when ground is once broken in that manner, it never becomes as hard again; and in that respect I must differ from my friend that advocates shallow plowing, who argues that ground will settle together harder, from being broken up."

Tobacco Culture.

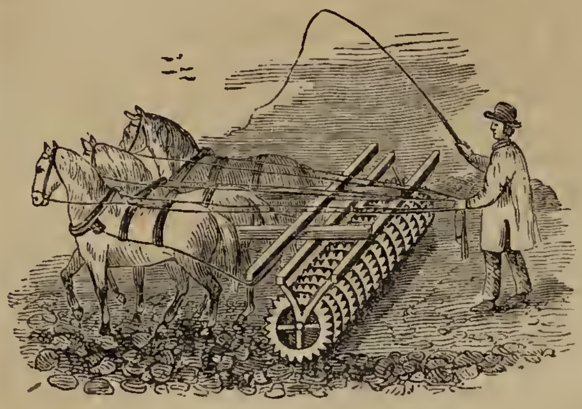
Eds. Co. Gent.—Can you answer me through The Cultivator, the following questions on the culture of tobacco: Where can the seed be obtained; what time to plant, and transplant; can it be grown in Northern New-York; best kind of soil, and its condition? A Subscriber. *St. Lawrence Co., N. Y.*

Tobacco can be grown, and will probably mature in St. Lawrence Co., for we have seen it ripen in the interior of Maine four years out of five; but we would not recommend it as a profitable crop to raise in a locality so far north as our correspondent. It will grow on any soil; but a deep mellow loam, plowed in the fall and cross-plowed in the spring, and well manured, is best adapted to it. Considerable quantities are cultivated in Connecticut, and it is a practice there to put on about thirty loads of barn-yard manure to the acre. The land for planting should be a southern exposure, and the beds should be prepared for seeding immediately after the frost is out of the ground. At that season care should be taken to protect the plants from frost, and after they have attained a good size, and are out the way of frost, they should be frequently hoed. The season of transplanting will vary with the location, but usually in northern and high latitudes from the first to the middle of June. Tobacco requires a mild warm season, and it is therefore very important that the plants should be started as early as possible. The culture of this plant is very much the same as that usually adopted for Indian corn—the plow, cultivator, and hand-hoe, being frequently used to keep down the weeds and loosen the earth. The plants should be transplanted in rows about three and a half feet apart, for it can then be worked with less damage to the roots.

We stated in the June no. of The Cultivator, that tobacco seed brought from the Island of Cuba, could be obtained free, by addressing Mr. Oliver T. Bragg, St. Louis, Missouri, to whom we refer our correspondent for the seed, and also for any further information in regard to its culture, which he may wish.

Remedy for Black Ants.

Messrs. Editors—We have been annoyed for several years, by large black ants in our pantries and closets. We last summer discovered accidentally, that ground coffee was an antidote for them. We continued to scatter it about their haunts through the season, and so far through this; and we are now confident that it will drive them from any locality. They must be followed from one closet to another, till they disappear. M. A. K. *Schaghticoke.*



Croskill's Clod Crusher.

Messrs. Eds.—Allow me to correct so much of your reply to the questions of Mr. John A. Dougherty, p. 305, no. of May 12, as relates to this invaluable farm implement. In the autumn of 1851, I had one made by the Messrs. Burrill of Geneva, who had got out patterns from England that season; and I presume they can still make them. Mine cost $60, and is worth three times $60 on my heavy clay soil. One year I rolled my wheat in alternate lands with my Crosskill and a large wooden roller, and was surprised to see a marked difference in the plants the whole autumn, in favor of the Crosskill. As it was *all* winter killed, I could not test it further.

A year or two ago, I saw mention made in the Southern Planter of this clod crusher, manufactured in either Richmond or Baltimore, and considerably used in Virginia. The price, however, was nearly double what I paid for mine. W. C. S.

Privy Arrangements.

Near most human habitations a nuisance is tolerated, because it is deemed necessary, which, however, with a little pains, and at trifling expense might be avoided.

As this is not an attractive subject I will state as briefly as possible my own method, and commend it to those who have not adopted a better-one.

The building is, of course, located in the back yard; the rear standing *flush* with the fence that encloses the garden. Instead of digging and stoning up a pit or vault, raise the frame and a wall, a foot or eighteen inches from the ground; or cheaper still, place it on square blocks at the corners, so as to side down to the ground on the three sides next your yard, and if more space is desired under the floor, dig away the earth a few inches before placing the building on the foundation.

Next, construct of plank, a box of the depth of a foot or more, the corners *halved* and spiked together with large nails, or otherwise strongly made, and of dimensions to occupy the space beneath the floor. This box is mounted on four cast iron wheels, or castors, two or three inches in diameter, which with the proper fastenings, you will procure at a few shillings cost at the hardware store. For this to run on, lay down a couple of plank, extending out a few feet in the rear of the building, on which nail a strip of board outside the wheels to keep them from running of the track. The car furnished in this manner is easily drawn out, and pushed back to its place as occasion requires.

From some neighboring marsh or pond hole, when dry and light draw a few loads of muck, or for lack of this any other earth, and pile in a heap near where the box is to be drawn out. Cover the bottom of the box with the dry muck or earth, and your arrangement is complete, more convenient than a deep pit, and at less expense.

As often as necessary, draw out the dirt car, shovel the contents on an Irish dirt barrow, wheel it off to a convenient place for a compost heap and dump it down; always using sufficient earth, lime, ashes, plaster or something of the kind to keep everything covered that would be offensive to sight or smell. This, by the by, should be one of the *chores* to be attended to, and not neglected, and if not unreasonably neglected can be done by man or boy in five minutes time.

By this simple method a nuisance often intolerable, is not only got rid of, but turned to valuable account. M.

Early Melons and Squashes.

Melons, cucumbers and squashes, as gardeners well know, are very difficult to transplant. Their roots quickly spread in every direction, and they are sensitive to the mutilation they must necessarily receive when the work is done in the ordinary manner. Various expedients have been resorted to. One of which has succeeded tolerably well, is to plant the seeds in an inverted piece of turf, embedded in the earth of a hot-bed, and before many leaves are made, to remove the young plants, with the pieces of turf, to the open ground. There are but two difficulties here. The turf does not allow the plants to become large enough before removal; and grass is apt to spring up from the pieces.

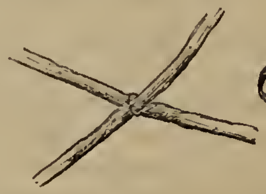


Fig. 1.

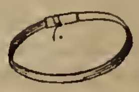


Fig. 2.

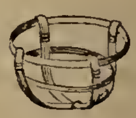


Fig. 3.

A better way is to make small open baskets, set them in the hot-bed, and plant the seeds within them. The baskets do not impede the roots, and when the plants are large enough, the whole, basket, earth and plants, is removed and set in a hole previously cut in open ground. The baskets are easily made by tying together with twine, as shown in fig. 1, two basket splints, basswood or other bark; then with another piece tied together at the ends, form the hoop, fig. 2; thirdly, bring the ends of the two first mentioned pieces down over this hoop, tying by twine, and the basket is made, fig. 3. If the soil is light and friable, it will be necessary to interweave a few more splints or twigs; but if tenacious, a more open basket will do. An active hand will make many of these baskets in an hour; and they will not only give earlier results, but save largely from squash bugs and other insects.

To Prevent Bee Moths.

Messrs. Editors—The Co. Gent. of May 26th, contains an inquiry of B. J. T., of Tennessee, whose bees are disturbed by moth worms, to which I take the liberty to reply. My suggestion is that about four or five days after they have swarmed (the period of swarming being, in this latitude, about the 15th of June,) or in about 15 days after they should have swarmed, in the middle of a clear; warm day, when the thermometer indicates 90° and upwards—put on thick over-clothing, veil and stout leather mittens, and turn the hive at an angle of 45°, or nearly upside down. Break out the brood comb, one piece at a time, and pass it to an assistant to brush off the bees. Then take it quickly to a dark room, place it on a tea-tray, on which slats have been previously placed, to save any honey or bees which may be attached to it. In case any bees should be found in the comb when in the room, have a small aperture in the shutter for them to pass out. Replace the hive, and the following day you will find the bees vigorously at work, building up a new comb. Keep the boxes on at all times during the honey making season. The brood combs should be taken out every year, and never left beyond the second, as they become black and filthy, and unfit for them to breed in. Amos Fish. *Albany, N. Y.*

Mr. Alexander's Annual Stock Sale.

Lexington, Ky., June 1, 1859.

L. Tucker, Esq.—Mr. Alexander's fifth Annual Sale of Short-Horn cattle and South-Down sheep, has just closed. Mr. Kelly, Cornell, Olcott and Johnson, of New-York, and Geo. Hartshorne of New-Jersey, arrived here last evening. I was delighted with Kentucky after I had travelled about 150 miles, and reached Bourbon county, and the far famed blue-grass pastures near Paris. The fields, studded with shade trees, and superb herds of Short-Horns scattered over them, presented a picture of itself which amply repays a journey here. Extensive fields of wheat and winter barley are seen, and generally promising a rich yield—the grain fully headed in many fields—and should the weather prove favorable a large yield will be given. But corn is *the* crop of Kentucky, and such fields are seldom seen at the north. The fields were being cultivated with the cultivator for the first time, and looked very promising. Occasional fields of hemp, oats and rye are seen; but in Bourbon and Fayette, wheat and Indian corn are the leading crops, though winter barley I think is receiving considerable attention. The meadow land is not extensive; the corn in this state answering mainly, I presume, for feeding cattle. Their pastures are beautiful. Blue grass and white clover will turn out Short-Horns for the shaumbles, which no country can excel—and I am happy to say that the red top or June grass of New-York and white clover, is apparently, and I think really the same—and our pasture fields may be as rich as these in many parts of our state, as they are now in Putnam and Dutchess, and in Steuben and some other counties.

We went over to Mr. Alexander's farm, about 15 miles from here, this morning, and found everything in order for the sale, and a collection of about 500 gentlemen. Among others were Vice-President J. C. Breckenridge, Hon. Jas. B. Clay, W. R. and Jeremiah Duncan, Mr. Shelby, Mr. Warfield, Mr. Mallory, Mr. J. R. Jones, Mr. Geo. W. Scott, late Secretary of the State Ag. Society, and the present Secretary, Mr. W. D. Gallagher, Mr. Byram of the Valley Farmer, Louisville, and many other gentlemen largely interested in cattle breeding. The cattle were all labeled with the numbers of the catalogue, and at 11 o'clock *precisely* the first animal appeared in the ring and was offered for sale, a *practice* that should ever be observed at public sales. Mr. Alexander announced at his house that this would be done, and it was to the letter. There were no purchasers out of the state, except those from New-York, and one each from Ohio and Indiana. The western people who usually attend these sales from that section, did not appear owing probably to the money pressure which still prevails there. The bulls were sold first—all but one, who was so unmanageable that he could not with safety be brought into the ring.

Twenty bulls were sold, bringing $2,720—the highest priced, $355, descended from the Balco stock, which is a favorite here—the whole averaging $131 each.

The cows and heifers were sold, twenty-three in number, bringing $2,715, and averaging $129, and upwards—the highest priced heifer, Cherry 3d, a beautiful animal, $335.

The following animals were purchased by New-Yorkers:

Wm. Kelly, Rhinebeck—for himself:

Mansfield, roan bull calf, 9 months old, sired by Fordham Duke,	$90
Miss Walter 2d, 6 years old, roan,	170
Mary Martin, 2 years 6 months old, roan,	50
Miss Wiley, 1 year old, roan,	100
Verity 3d, 8 months old, white,	95
Hope, 7 months old, red and white,	50

For Hon. A. B. Conger, Waldberg:

Prunella, imported, 4½ years old, roan,	$250

E. Cornell of Ithaca, for himself and friends in Ohio:

Bull Mortimer, roan, 8 months, by Fordham Duke,	$50
Cow Hannah, roan, 1½ years old,	100
do. Mary Bell, red, 1½ years old,	60
do. Mary Carr, red, 1 year old,	120
do. Hostess, roan, I believe, 1 year old,	95

The purchases by these gentlemen were very judicious, and if I am not much mistaken, will be heard of again in some other States, in competition for laurels to be honorably won. Mr. Kelly and Mr. Cornell, I believe, purchased the largest number of animals of any purchasers at the sale.

Mr. Alexander sold eleven South-Down yearling bucks for $384—averaging nearly $35 each, and three Cotswold bucks for $56.

The whole amount of sales:

Bulls,	$2,720
Cows and heifers,	2,715
Sheep,	384
	$5,819

Although these prices are not large in the aggregate, I think, considering the times, the sale is not a very discouraging one.

The breeding stallions, "Lexington," "Scythian," imported, and "Review," were shown in the ring in fine condition, and attracted much attention. Lexington is limited to 75 mares at $100 each—has already served 64. Scythian is limited to 60 mares at $75 each—has already served 38. Review has served 35 mares at $50 each.

Mr. Alexander has 50 thorough-bred breeding mares. The income from the horses must be very large. Mr. Alexander has a splendid farm, and in fine order and very attractive. Will give you particulars hereafter. Our reception in Kentucky was most cordial and gratifying, and we were greatly delighted with the trip, new acquaintances formed, and new views impressed upon us of the immense advantages and resources of the Western country, especially of the States of Kentucky and Ohio. B. P. J.

Cheap Paint for Buildings.

Eds. Country Gent.—Inquiry is made for a cheap paint for outside of houses and fences. The following receipe is cheap and good:

One bushel unslacked lime.
Half a gallon salt.
Three pounds allum, powdered.
Three pounds salaratus.

Mix and put in a tight barrel with one head out. If the lime is quite fresh, cold water—if not, then use hot water. Keep stirring while slacking, adding water as required, so as not to become dry at any time. If it heats dry it becomes lumpy, and must not be overflowed with water so as to prevent the slacking going on. Stir up well from the bottom. When finished it may be thick as mush. When to be applied by a brush, make the mixture the consistency of whitewash—about the thickness of cream. Apply the first coat very thoroughly, filling every crack or interstice between the bricks or in the boards. For wooden fences a second coat of the same material is all that is required. Those who desire to have some other color than white, can add coloring matter to taste.

For Brick Houses.—For the second coat, add to the first named materials 12 pounds of melted tallow, and mix as before. This coat is impervious to water—is brighter, looking clean longer than paint, and preserves the cement between the bricks better than paint. It costs but little to renew this, say once in three or four years. A neighbor of mine washed his two story brick house, about 40 feet square, seven years ago, and again this spring. He is an old gentleman. It occupied himself one day, and a hired man half a day for this one coat. He says if a painter offered to paint gratis, he should not do it, for reasons given in foregoing. The difficulty, if any, is in the mixing of the materials properly. It cannot fail to please, especially on the brick. Isaac Dillon. *Zanesvills, O.*

Hay and Hay-Making.

Of the importance of the hay crop we need scarcely remark—save that its value exceeds that of any other product of the northern section of our country. That this value might be largely increased without extending the area devoted to grass, or giving more time to its manufacture into hay, can scarcely be doubted; for the value of hay, as food for stock, accords with the care and judgment bestowed on its making, and the difference between hay and straw is not so much in the plants themselves, as in the stage of growth in which they are cut, and the curing they receive. One farmer may keep his stock in thriving, fattening order through the winter, while another, although he feeds the product of more acres of meadow, shall find them constantly failing in condition. The first has hay made in the best manner, and "of such a quality, that a given quantity of it will produce nearly as many pounds of meat or milk, as the grass itself would have produced if eaten in a green state."

In what stage of the growth of grass it shall be cut, and the manner in which it shall be cured, have long been acknowledged questions important to the practical farmer, though as yet no decisions in which all acquiesce, have made any one practice the general one. Some cut in the season of flowering before the blossoms have fallen; others not until the seed has formed; and others still, defer the operation (with some grasses,) until it is fully ripe. Some cure by exposure to the sun, as rapidly as possible; others seek to perform the same process with the smallest expenditure of labor; and others still would keep the hay as fully shaded as may be while drying. Each class bring arguments to sustain their methods of procedure, both in cutting and curing; but to our mind, chemistry and practical analogy teach us valuable lessons on the subject, which, in a condensed form, we shall attempt to present to the reader. We may state that our attention was first drawn particularly to the subject, ten years since, by an article in *The Cultivator*, giving extracts from a scientific report made by Dr. Thompson for the British Royal Ag. Society.

Chemistry shows us that all plants contain the largest amount of matter soluble in water, at the period of flowering, and that the sugar and gluten of the grass, and a few other soluble ingredients, constitute its chief value as food for animals. These rapidly diminish as the seed forms, changing into insoluble woody fibre, and the hay, which should as far as may be resemble grass in its most perfect state, is worth much less if not made until after that period. There are but few exceptions to this rule, but we believe the Kentucky Blue grass, the June grass, and some others which furnish but a light amount of stem, and are most valuable for their leaves, which continue growing through the summer, may stand past the flowering stage without loss.

The advocates of ripe hay bring as an argument in their favor, the fact that such hay yields the greatest amount of extract when boiled, and that therefore it must contain most nutriment. It is found, however, that boiling very imperfectly imitates the process of digestion, and experiments with the living animal confirm what chemical analysis teaches, that the best hay is that cut and *properly cured* at the period of blossoming.

That process of curing which shall most perfectly retain the nutritive properties present in the plant, is the best process. We do not wish to change or evaporate the juices of the grass, but only to dry out the water. In drying herbs for medicinal and culinary uses, the experience of many centuries teaches that *drying in the shade* is the only way to accomplish the desired object. In making hay this cannot be entirely accomplished, but the plan which most nearly secures it—that of curing in the swath and cock—is a good and safe one; advantageous also, as requiring less exposure to injury from rain than any other.

Clover hay and coarse herdsgrass especially need to be cured in the shade, as they bear little handling while dry, without loss of leaves and blossoms. When mowed, let the grass get fairly wilted and all external moisture dried off while in the swath, with perhaps a single thorough shaking up and spreading, and then put into cocks, and it will be cured with very little loss of value. The partial fermentation or "sweating" which it undergoes, causes but slight change in its constituent parts—save that it separates the water therefrom—and after standing thus for twenty-four hours, it needs little or no after-tending to prepare it for storage, and has far less of that harsh and strawy character than it would possess if cured in a different manner. In curing by this method, care should be exercised that the hay is not put up before it is fully wilted, and that the cocks be small and well constructed, so that the sweating process be not carried to an excess, and induce so great a fermentation as to decompose the sugar of the hay, changing it to alcohol and carbonic acid, both of which soon evaporate.

The weather has a great influence on the value of the hay crop, but this we cannot long foresee, or at all control. If it should prove unfavorable and constantly changing, we have found that hay already cut had best remain in the swath—retaining its value thus unstirred, much better than with repeated dryings and wetings. Nothing so injures hay as washing by rain, and this, if many times repeated, will totally destroy its value as food for animals. The provision of hay-caps should not be neglected. These will often enable the farmer to secure hay in good order, which would otherwise be seriously injured. In getting in hay imperfectly cured, if it can be allowed to stand for twelve or fifteen hours in the load, it will become better fit for storing. It will probably heat slightly in that time, which will be arrested by the process of unloading, and leave the hay sufficiently cured for the mow.

Good tools and good workmen are essential to the economical performance of hay-making. There is more ease, as well as completeness, with the good workman in the performance of his labors, and good tools are also a great aid in these respects. Order and readiness in the whole round of preparation, give largely increased facilities for pushing forward this and all other farm operations. It is important to secure ample means to do every thing as and when it should be, since so much depends on the right curing and securing of this great product. The general use of mowing machines and other labor-saving implements, render farmers to some degree independent of manual labor, often difficult to be secured, and always dear at this season of the year. These improvements will often enable the usual laborers of the farm to secure in good order, fifty acres of meadow more readily than they could have got in ten without their aid.

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Hay Caps.—I used one hundred last year, and like them so well that I shall procure more this season. C. W. G.

Red Top and June Grass.

Writing "About Grass," in the *Rural New-Yorker*, H. T. B. of Wyoming Co., says "red top is well adapted to wet land, and should be propagated with more care—its seed is seldom saved for sale or sowing." This is very true of Western New-York. New England farmers make more account of it, and we believe find it profitable to do so. In Western New-York, it frequently "comes in of itself" on swampy land, and if cut at the right time makes very palatable hay. It should be cut while yet *red* top, and before so bleached that the heads are nearly white.

Of June grass he remarks, "It is not considered respectable, * * but it covers many an acre, which would never be seeded except on the "voluntary principle." Under favorable circumstances it makes a very good growth, and is valuable as early feed. Where it predominates in meadows, it should be cut by about the middle of June, or as soon as the seed is formed, and it makes exceedingly nutritious hay." This grass is the same as the far-famed Kentucky blue grass, and should receive better consideration among farmers.

The "Ingalls' Cow."

Messrs. Editors I notice considerable has been said in the Country Gentleman recently, about the Oakes cow, and the great amount of milk and butter which she yielded. I wish to present to the readers of your journal, an account of a remarkable cow, formerly owned by Hon. Hanibal Ingalls of Mercer, in this state.

In 1847 an account of this cow was published in the Maine Farmer, containing a statement given by Mr. Ingalls, of the yield of his cow in milk and butter, for fourteen days, ending June 27, 1847. This I will copy:

	Lbs.	*Oz*
First week—whole weight of milk,	353	
Average per day,	50	7
Greatest weight in one day,	53	8
Whole weight of butter, 1st week,	19	10
Second week—whole weight of milk,	367	4
Average per day,	52	8
Greatest weight in one day,	56	4
Whole weight of butter, 2d week,	21	

making forty pounds ten ounces of butter in fourteen days, requiring eigheeen pounds of milk to make one pound of butter.

The Ingalls cow was of a native breed crossed with the Durham, at this time was nine years old, of good size, gentle and kind.

The history of this cow is thus given: "She was calved December, 1837. Her mother is described as being a small black cow of the native breed. She had a calf when two years old, and at that time gave a very large quantity of rich milk, and continued to increase in milk until she was six years old. She then began to run down, and finally got so feeble that she could not get up alone; all of which time she gave more milk than two other cows which were considered *first rate*. Neither her milk or butter was ever weighed, but it is thought she gave as much as the "Ingalls cow." When about worn out she was disposed of to Mr. Newcomb True of Mercer, who with great care and nursing succeded in raising from her one of the best cows the country ever afforded—the "Ingalls cow." No reason can now be given why she and her descendants proved themselves so much more valuable for dairy purposes than many other cows of this country."

In view of the above facts, I very much regret that a complete statement of the yield of the "Ingalls cow" for a whole year, and the average per day for that time, was not given by her proprietor. I will just say in concluding this brief article, that our dairy cows can and must be improved. Can we not have at this time, as good cows for the dairy as former times produced; are we progressing in this matter, or are we going backward? Is there no encouragement for breeders to produce extra milkers? Do we not have frequent inquiries for milch cows? Are not these things of considerable importance? Lane *The Alders, Somerset Co., Maine.*

Two Receipts.

Eds. Co. Gent.—I send you two receipts, worth more to your farming readers, than the Co. Gent. will cost during one's life time.

I—Remedy for the Hog Cholera.

Four pounds sulphur.
Four pounds Madder,
Two pounds saltpetre.
One pound black ammonia.

Mix together and give a tablespoonful two times a day, in milk, gruel, or anything they will eat it in. Should they be too far gone to eat, drench them with it, and my word for it they will have no hog cholera.

II—For Poll Evil, Fistula, Warts and Corns.

Three gills alcohol.
One ounce aquafortis.
One ounce spirits turpentine.
One ounce corrosive sublimate.
One ounce camphor.
One viol oil of spike.
One ounce castile soap.

Mix together in a strong bottle, and shake well before using. Wash the affected parts well with the soap suds once a day, and apply the above preparation until it is cured. F. Pound. *Ballett Co., Ky.*

Bite of Musquitoes, &c.

Oil of Pennyroyal, rubbed on the face, hands and parts exposed, is said to be a preventive for the bite of gnats and musquitoes. It should be properly diluted with some sort of spirits, as if used in its concentrated state, it will cause the skin to smart for awhile. This preparation seems to be highly offensive to their gnat and misquitoships, and they leave in disgust. C.

The Rose Slug.

There is a remedy for the rose slug, which has for so many years infested our gardens. It is the leaves of the Ailanthus tree boiled. Sprinkle the bushes with the water early in the morning, when the slug is on the top of the leaf, and it will effectually destroy them without injuring the foliage. S. O. *Sag Harbor, N. Y.*

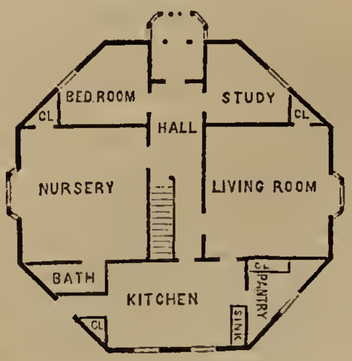
Bees in California.

The June number of the *California Culturist* contains an article in regard to bee culture in the vicinity of Napa city, as practiced by Mr. T. G. Baxter, who purchased in April, 1857, ten hives of bees, and on the 24th of March, 1859, they had increased to forty-four, or thirty-four hives of young bees. We copy a portion of the article to show the great yield of one hive for a single year:

"Three of his hives—which are those having moveable boxes at top—were left without boxes as places for storing honey; of course, the bees had but little labor to perform beyond that of their own support and the raising of young bees. Seven swarms were allowed the top boxes to work and store honey in, which they did to the amount of several hundred pounds. And yet there was no apparent difference in the breeding, between those having extra labor to perform and those that had not. From one hive he obtained five young swarms in a season; one on April 21st, May 5th, May 6th, and on May 9th two swarms; whilst these young bees afterwards turned off the same season three swarms more—making the entire increase eight hives from the old one."

Product of Ten Cows for one Year.

Mr. William J. Fern of Cincinnati, Ohio, furnishes for the *N. E. Farmer*, a table of figures showing the product of a small dairy of ten cows, for one year, ending with May, 1858. The cows were of common stock, costing from $25 to $30 each. In winter they were fed liberally with straw and wheat bran with corn meal, and in summer with bran and good pasturage. Feed was given them dry and cold, and the stable open enough to be well aired. Cows were only housed in the winter. The sales are, of cream, at one dollar per gallon, to confectioners—and of skimmed milk at 12 cents per gallon, to boarding houses—the result of the figures being as follows: Total amount $1,258.25, being an average for each cow of $125.82½.



Octagon House.

I send herewith a plan of an Octagon house, designed to meet the wants of such as desire the number and kinds of rooms named in the 3d list of Annual Register, Vol. 3, p. 315, and in accordance with the rules in said article as well as with the rules given in Annual Register No. 2, p. 178. The plan needs but little explanation. Scale, 32 feet to an inch.

The kitchen will receive full light from its two windows, and from the glazed door opening into the pantry The dish-closet opens into the living-room, and into the pantry. Iron closet under sink Door to cellar opening from the kitchen, under the stairs.

The Parlor is placed up stairs; this is to be allowed in accordance with rule 4th, Annual Register, No. 3, p. 316. I would say, that in the country where such a room is but little used, that it should always be placed there The plan of the second story may correspond with that of the lower, or otherwise, as fancy may dictate. H. T. Vose. *Jackson C. H, Ohio.*

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How to Prevent Wheat Turning to Chess.

Messrs. Editors—I am sorry that Mr. Clisbe misread my article about chess. I never thought or said he was so unpardonably stupid that he did not know clean wheat, or chess from wheat; and I have no doubt but Mr. C. and every other farmer can clean chess out of wheat as well as I can if they take the same way to do it. I no sooner learned how to clean it, than I immediately told my neighbors, as every one of them then believed that wheat produced chess, and I think none of them now believes it. But Mr. C, or any other farmer, has to do more than merely clean the chess out of the seed. They must see that neither their cattle, horses or hogs *roam* over their fields when they have a chance to eat chaff in which there may be chess. Sheep digest everytning; nothing that passes through them will vegetate; still they may carry out chess or other foul seeds between their hoofs, and even on their wool. Again, taking the manure out of the yards unfermented, will take out a large quantity of chess seed that will vegetate.

Cleaning the seed thoroughly, is the first point; but when I first became sure that wheat would not produce chess, I not only heaped and fermented the manure, but I again turned the heaps in the end of June or early in July, generally in showery days during hay and harvest. After being turned thoy again fermented, and then if chess seeds were sound on the outside of the heap or that laid on the ground under the heap, they had another chance to be destroyed. By proceeding in this way I got free from chess.

One year I was pulling stumps with a screw-machine, and had often to open the fence in order to set the machine for stumps near the fence; we did not finish until winter set in, and the fence laid open all winter. The neighbors' cattle were often in the field during winter. After that, for two or three crops, I had some chess. Another field, which I brought firewood through during winter, laid open, and many neighbors' cattle were in it during winter and spring. The first wheat crop after that, had a little chess. My second crop is now growing there, and I hope I may have no chess. Again, in that dry season, 1854, neighbors brought their cattle and horses to water at a well I had in a field. There I had a little chess in the next wheat crop. Although very few of the farmers around here raise much chess, yet several raise some. It requires care to get rid of it, and care to keep clear of it, *if your neighbors raise it.* But if the seed is made perfectly clear of it, I believe any novice will soon see that it won't grow where the seed was not deposited in some way.

I have to write often on the same subject, to get at all the arguments I should use in such a case. I have often thought I should never write more on chess, and I think this will be my last on that subject, as I believe I have said all I can say about it.

I have just had a letter from St Lawrence Co., asking about chess, and stating some cases. I have also heard from a farmer in Canada, telling how he cleaned his wheat seed on my plan, and that he has nearly cleared his farm of chess. When at you city some six weeks ago, if I had known where Mr Clizbe resided, and if near the railroad, I would have called and seen him, as I would like to see the land and the man who can raise chess from wheat. There are two fields in this neighborhood that, 20 years ago, were sown with good sound seed wheat—one of them immediately adjoining one field of mine. One field produced neither wheat nor chess—the other produced chess, but no wheat. The owner came to enquire of me what was become of his seed wheat, if *it did not turn chess?* I referred him to this other field, and asked him why there was no chess there. I had no doubt but I knew the cause of the non-vegetation of the wheat in both fields, but this chessy article is too long already. John Johnston.

We hope that friend Johnston will not tire in the good work in which he has been so long engaged. We have combatted this doctrine of transmutation as often as once a year for near thirty years, and we cannot consent to the withdrawal of so efficient an aid as Mr. Johnston has proved himself to be, while such large numbers still hold so pertinaciously to this error—an error deeply affecting their pecuniary interest; for few, if any, farmers who believe that wheat will produce chess, will make the necessary efforts to eradicate the chess plant from their farms. To any wheat-grower who believes in transmutation, the above communication will be worth ten years subscription to the Country Gentleman, if he will adopt the course Mr. Johnston recommends, as he will thereby in all future time prevent *his* wheat from turning to chess.

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Muck as a Manure.

"W." of Utica, asks (Co. Gent, March 24,) "if muck taken out of its bed and spread upon adjoining dry and light but worn soil, would benefit it for oats this spring" It is well answered that "the result depends upon the character of the muck, and also on the land to which it is applied." Let me state a few facts in my own experience in applying muck unmixed to the soil and at the same time with stimulating fertilizers.

A few years since I drew from a mucky pond (nearly dry in dry summers) seventy-five loads of muck on a gravelly loam barley stubble, which, owing to a failure to "catch" well in clover, we thought best to plow up for winter wheat. It was spread at the rate of twenty loads per acre, and then plowed in. The crop upon that part to which it was applied was thought sufficiently superior to the remaining portion to pay the expense of the application, and the growth of clover since has been rather the best on the muck dressed part.

In another case muck was drawn from the pond in the fall, and spread and plowed under in the spring for corn and potatoes. The effect was more marked than in the previous instance—owing, no doubt, to the exposure of the muck through the winter to the action of the air.

Four years ago, on a dry, light and worn soil, we had muck applied from an old cranberry marsh, at the rate of thirty loads per acre. Over this was spread about one-third the quantity of leached ashes, and the whole carefully plowed under. Only a portion of the field was so treated, and the whole was planted to corn. The crop on the dressed part was double that of the undressed, and estimated at forty bushels per acre. The application has been of permanent benefit to the soil, and has been extended over the whole field, with unleached ashes, however, and in smaller quantity.

For light, loamy land, muck should be plowed in and well mixed with the soil Its greatest value, we think, is found when composted with barnyard manure; for this purpose its value can scarcely be over estimated Its character is variable, but this is readily determined by the vegetation it produces. One swamp near us abounds in sorrel, and the muck is decidedly acid when dug from any depth. But this part of the subject has already been treated at length in former numbers of your journal. B.

As a further experiment in the use of muck we condense a statement made by a correspondent of the *Rural New-Yorker*. In 1858, he drew from a tamarac swamp, upon high, warm, loamy land, sufficient muck to cover the greater part of a nine acre lot, and finished the field with barnyard manure. The muck was taken from a ditch in the winter, and allowed to lie in heaps until spread for plowing the first of June. The lot was planted to beans, and cultivated in the usual way—the crop was a good one, and completely covered the ground. The beans were rather better where the muck was applied than where the ground was dressed with manure.

Long-Wooled Sheep.

EDITORS COUNTRY GENTLEMAN—As the English long-wool sheep is now attracting considerable attention, and many farmers debating the policy of their introduction, I concluded I would weigh the wool as it came from my flock, and publish the same to the world My yield is a fair criterion of the yield of this race of sheep, as all ages and sizes are included. My oldest ewes yield as low as 4¼ to 5 pounds each; they are 7 years old, and have bred regularly since they were two. The same animals at yearlings produced from 10 to 12 pounds to the fleece. Their treatment, to a northern man, would seem to be bad when I assert that this flock of twenty-nine head were never fed *one feed* of grain or hay during the entire year past; in fact they know not what hay or grain is, but have lived on grass alone, and whithout shelter. The Kentucky blue grass will keep sheep fat the year round, and the great difficulty in its use is that if a breeding ewe loses her lamb by death or accident, she is apt to prove ever afterwards barren from too great an accumulation of fat, and we are compelled to consign her to the butcher. I have reared this race exclusively for several years past, the carcass being the leading object, but find that the wool will pay the cost of keep, leaving me a carcass of more value, *pound for pound*, than first class corn-fed beef, and this mutton, of course, is clear profit. Assuming that the same amount of food required to make one pound of beef will make a pound of mutton, the discerning feeder or grazier must see at a glance the vast advantage of the sheep over the bullock. The latter must be charged with the entire cost of his food during the process of his growth and fattening, while the former by his annual wool clip pays his own way. The New-York market tells the tale as to their comparative market value; first quality mutton always commanding as much per pound as the same grade of beef, and generally from one to three cents more. My entire flock (nursing ewes excepted) are first quality mutton, as fat as No. 1 *corn fed bullocks*, and worth as much per pound, and made on grass alone, and that grass paid for by the wool clip.

As an agriculturist I am a great stickler for *facts*, and abhor mere *theories*. I have furnished you with the facts in regard to this race of sheep with but one assumption. It remains to be *tested* if a given amount of food fed to bullocks and sheep will yield equal amounts of *butcher's meat*. My opinion is that no animal will yield a greater return in butcher's meat, for the food consumed, than the English long-wool sheep, and including the Downs; yet as I have never tested it by an actual experiment, it is mere opinion, and can only go for what it may be worth. See appended table:

Table of Weights of the Fleeces of 29 head of Stock Sheep—pure Cotswolds—as shorn on the 12th of May, 1859, and weighed in the grease, but free from tags, burs, or trash, and in merchantable order—sold on the farm at 25 cents per pound.

No. 1, ------	5 lbs.	Ewes nursing, and over 5 yrs. old.
2, ------	5¾ "	
3, ------	4½ "	
4, ------	4¼ "	
5, ------	6 "	
No. 6, ------	8 lbs.	Ewes Nursing, and between 2 and 5 years old.
7, ------	6 "	
8, ------	7½ "	
9, ------	6½ "	
10, ------	6½ "	
11, ------	8 "	
12, ------	8 "	
13, ------	10¼ "	
14, ------	8½ "	
15, ------	7 "	
16, ------	6 "	
17, ------	7 "	
18, ------	6 "	
19, ------	6½ "	
20, ------	6½ "	
21, ------	7 "	
No. 22, ------	11½ lbs.	Yearling Ewes, first clip.
23, ------	12 "	
24, ------	10 "	
25, ------	11½ "	
26, ------	10½ "	
27, ------	10½ "	
28, ------	13 "	
No. 29, ------	21 lbs.	A 3-yr. old Buck, & 2 yrs. growth.

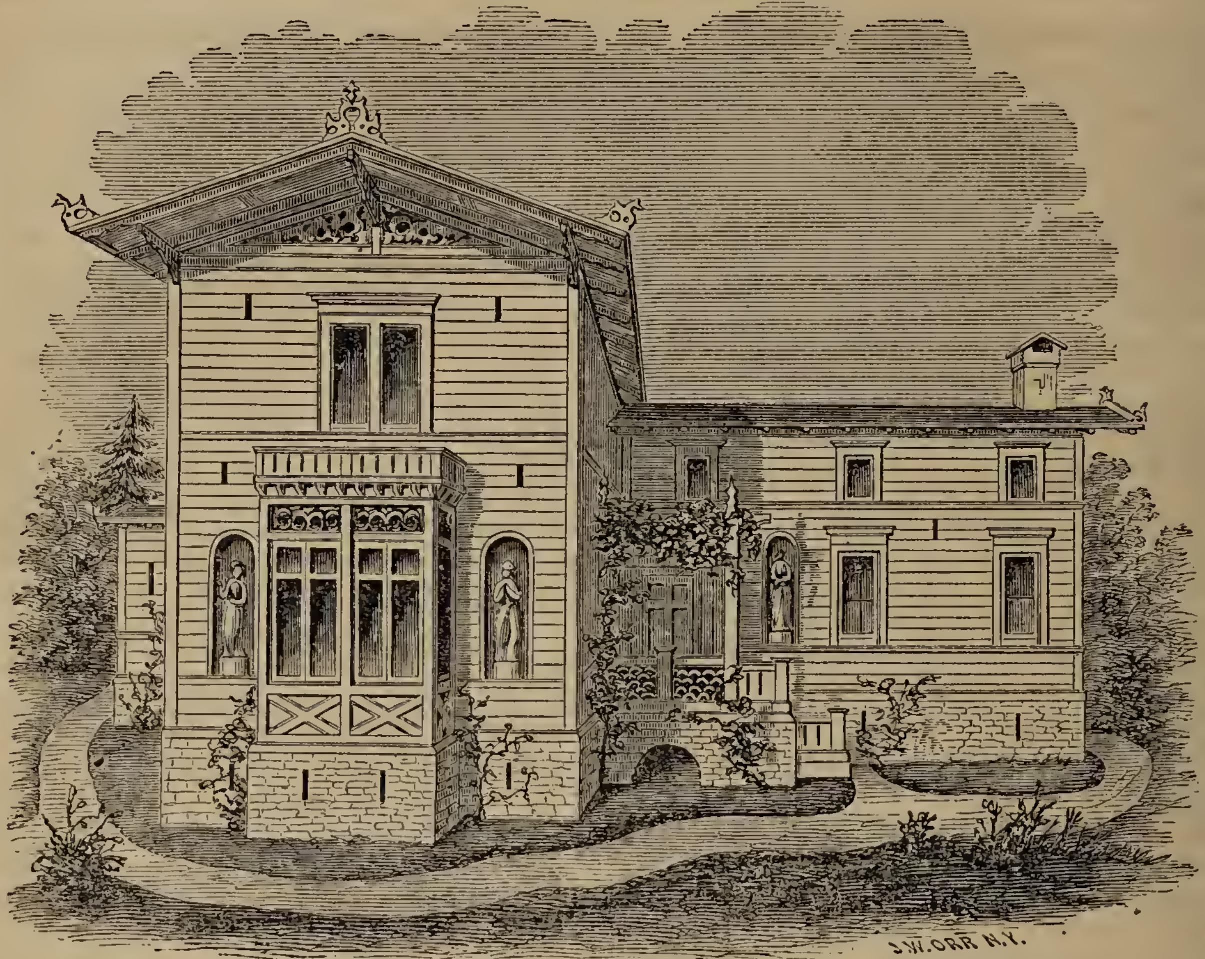
Total, -- 240¾ lbs., or 8 3-10th lbs. average.

Fernleaf, Mason Co., Ky. ANTHONY KILLGORE.

Butter Salt.

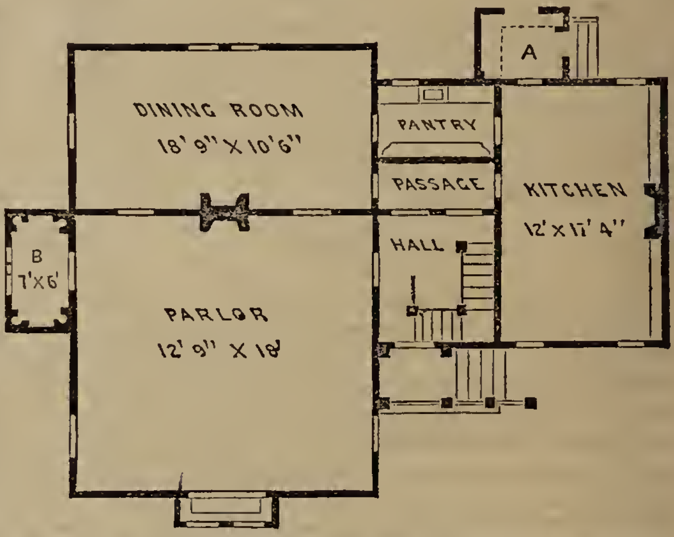
If a farmer brings a choice article of farm produce to market, he should insist upon receiving a price for it corresponding to its quality. There is, perhaps, more difference in the quality of butter than in any other article. It may be well worked and put up in fine style, but much of it is spoiled with too much salt, and often by using too coarse salt. It should be ground fine, be pure, and the butter for market better be not salt enough than too salt. We find in the *N. E. Farmer*, a receipt for preparing dairy salt, furnished by a Vermont correspondent of that journal, to whom it was introduced by an experienced Scotch dairyman:—

> Take the best crystal salt, wash it, dissolve, strain, settle and turn off; boil it down in some perfectly clean iron vessel, skim as boiling; when stirred off dry, it will produce fine salt, white as the drifting snow, which if stirred up in a glass of water, will produce no sediment, and will be distinct from any mineral or other possible impurity.



New American Style of Villas and Cottages.

MESSRS. L. TUCKER & SON—In attempting to originate an American style, I have cherished the same motives that have prompted other foreign architects to the same task with their respective countries, and as *we* are beginning to appreciate what is true Art and the beautiful, I have reason to believe my efforts towards the production of an American style, will not fail to be recognised by every lover of art. In conceiving this style, my aim has been to gain a characteristic of the manners and customs of the people, a character of the interior represented by certain details on the *exterior*, and a unity and harmony with masses and details. As this example is but an introduction, and quite miniature—nevertheless I have here shown every characteristic that is found on the larger examples. In regard to the character, I will describe it briefly. This design is the residence of a village merchant—characterised by the liberality of the details—the statues (being of terra cotta,) giving it an air of refinement and love of art.



In regard to the character of the interior rooms by details on the exterior, I have shown a representation for the parlor by the bay window and statues, being the richest part externally, as it generally is interiorly—dining room by a wide window and its details, kitchen disguised from its situation (in this instance.) The entrance a distinct and interesting object of itself—the main bed room by the wide window over parlor and the servant's rooms by the diminutive windows. In regard to the plan, which is the owner's requirements, we enter a large hall, doors to every room; a beautiful staircase in the hall—(landing of stairs is over front door)—dining room communicates with kitchen by the two passages, one by hall passage, the other by the butler's pantry—kitchen has a large fireplace—sink on one side, dresser on the other. A is a wood house if desired. B is a boudoir room for the purpose of the lady of the house entertaining her morning visitors without using the parlor. On the second floor are four bed rooms, closet to each, and door from each room to hall stairs. I have also provided a linen closet and store room besides. Combined with all of these comforts is a beauty in every detail, line, and color; and I trust that this miniature example will convey a comprehensive idea of my attempt towards the production of an American Style of Architecture.

The cost of this example was $2,200 complete—the interior finely finished—but I can reduce by a plain finish, to the cost of $1 800. (See advertisement.) LAWRENCE B. VALK, 627 *Broadway, New-York.*

Editorial Correspondence.

As we stated in THE CULTIVATOR for May, the Junior Editor of the COUNTRY GENTLEMAN and THE CULTIVATOR, left New-York in the Steamship Vanderbilt on the 23d of April, for Europe, where he is to spend the summer in an Agricultural tour through some portions of the Continent and Great Britain. His letters, which are published in the weekly nos. of the Co. Gent., are quite too extended for the limits of our monthly sheet. We shall, however, give such extracts from them in THE CULTIVATOR, as we can make room for without crowding too much on other matters.

From his first letter, dated on board the Vanderbilt, at sea, May 2, we extract the following description of

The Ship and its Accompaniments.

I am now writing in my "state-room," whose exterior admeasurement I take to be precisely six feet square at floor, and seven feet high to ceiling. Each of the two large *cylinders*, the heads of which will probably first attract our attention in going to see the engines, might make nearly a couple of such apartments. They are 7 feet 6 inches diameter, and 12 feet in height—or, as it is termed, in the stroke of the piston rod. As fast as the steam is exhausted on one side and admitted to the other side of the piston, the rod performs its ascent or descent, carrying with it its end of a lever called the *walking beam*, at the other extremity of which plays up and down the arm that turns the heavy shaft of the big wheels that carry us along. In this simple outline we have the shadow of that real power, with its manifold niceties of arrangement, and combinations of arms and valves, and packing and oil, which it took some five or six thousand years for the mind of man to achieve, and which while rated in comparison with animal power,—the engines before us being considered equal to 3,000 horses, accomplishes tasks that mind before could not conceive, or even those strong arms work out that piled the time-defying pyramids. The engines before us work with that superhuman constancy and tirelessness; with that regularity and stillness of progress, that one can but wonder whether some process had not deprived of all their weight and inertia, the solid metals of which they are constructed. The paddle wheels are about the hight of a common four-story house—their diameter being 42 feet. They are 10 feet wide, and when the ship is loaded, dip about 9 feet into the water, so that it will be readily seen that considerable power must be required to make them revolve their huge circumference 12 times per minute. This they do with a uniformity almost perfect, the number never having varied more than between 12 and 12½ revolutions to my knowledge, and I have timed it frequently. There is a dial, too, which records every turn of the wheels in the steamer's course, and from which we learn that about 180,000 times is requisite to traverse its ocean road. Turn away, then, merrily, ye stately discs! Bring us soon where there shall be no longer this ceaseless undulation and jarring of movement, and where earth can once more give firm footing to her errant sons.

It is the next inquiry that arises in the mind, where and how is generated the steam that does all this? For 200 feet from the forward end of the two forward boilers to the after end of the two others, away down under the lowest deck, itself 18 feet from the ship's bottom—lie stretched the four which do the heating of our steam. In the part of the 200 feet between and unoccupied by the boilers, there is not wanting enough to fill the space. Thirty-two furnaces are every day resolving into heat, (not to mention the smoke and ashes,) a hundred tons or over of coal. Three gangs of fourteen men are constantly feeding their glaring mouths, watch by watch, and we see them turning here and there with the alternations of fiery light on the grim face, or stout shoulder, or burley frame, in a picture which an imaginative artist might take for a study, and clothe with a kind of infernal horror.

As we mount again the iron-rodded steps, we see that several of the men are confining their attention exclusively to keeping every part well oiled. It is very true,—the old comparison of pleasant words that form the harmony of intercourse, with the lubrication that reduces to comparatively nothing the friction of concurrent metals. The ten or fifteen gallons of oil which every day smooth and accelerate our machinery, are as necessary to its working as the tons of coal, and the water over the fires; but how many forget, that, to make a perfect life, those words that cheer, those kindly actions that ameliorate, those genial tones that are themselves a benison, are as really essential as the austerity of the spirit, or even the increase of great gain!

The Vanderbilt was constructed under the immediate supervision of its now aged, but still vigorous owner, who, having begun life by rowing a little ferry from New-York to Staten Island, was able in the year 1856 to pay out the *million of dollars* which the ship cost that bears his name—it is said without borrowing or taking credit for a cent. The work upon her was all done by the day, from the very laying of the keel. As the Commodore never insures any of the large number of vessels he owns, preferring to run his own risks, he may well be supposed to have taken unusual pains in the construction of his largest venture. I was informed that knees or similar timbers which he rejected as not first-rate, were afterwards used in building the U. S. Steamer Niagara. If I could have seen the framework of the ship, I was told, there would be no longer occasion for wonder that a construction of such magnitude should perfectly stand the constant joltings of the waves; and from the description that followed of the interlacing of live oak timbers and the banding of iron plate, one would think every conceivable means of strength and firmness had been adopted. Three hundred and fifty feet is a considerable length to undergo the twistings of winds and waters. The breadth of the vessel is fifty feet; her depth of hold thirty-two feet, and she draws from 18 to 21½, according to her lading. Her custom-house tonnage, which excludes all the space occupied by machinery and coal, is 3,360 tons; that of the carpenters is 5,300. In reply to some queries as to the weight of her machinery, Capt. LEFEVRE thought that a safe estimate would be from 1,500 to 1,800 tons; her wheels weigh each 100 tons, and she carries 1,400 or 1,500 tons of coal. Then she has room for 1,200 tons of freight, and can accommodate in her state-rooms at the utmost 475 passengers. When the passengers are numerous the crew must be increased; it varies from 140 to 160, though I think on our voyage we had but between 120 and 130, of whom 54 were under the Chief Engineer, a large number under the head Steward, and the remainder the sailors who worked the ship.

Passengers not often Noticed.

There is one class of passengers to which I have not referred myself nor heard of reference by others, but who must be here numerous, and how widely varied! I mean those Hopes and Purposes, that, like attendant spirits, are hovering around the hearts of us all. I think I see that in some, they are rather birds of Carrion, seeking really sensual indulgence in an old and strange land, instead of those objects which their possessors perhaps imagine they are following. In others they are desirous of Gain, constantly whispering to the soul, Get, get, get! In other cases yet, are there not pure or noble Aspirations, with which at present the stranger shall not intermeddle?

> "Alike the busy and the gay
> But flutter through life's little day,
> In Fortune's varying colors dressed;
> Bruised by the hand of rough mischance
> Or chilled by age, their airy dance,
> They leave, in dust to rest.

What a procession from the spirit-land could we behold, if each of these waiting genii would clothe itself in some visible shape when the vessel comes to her anchorage! What a panorama of hearts, if all these airy attendants could spread before us the tale of each breast over whose emotions they preside!

Course and Speed of the Ship.

As I have never seen the course of a steamer in print, and the figures will take up very little additional space, I will subjoin them in a note.* They are all that a sailor requires to lay down his route on a chart ,and perhaps some young reader has a map large enough on which he would like to try the experiment. It only requires to find the point which the degrees on the top and sides of a map show to be in the latitude and longitude mentioned at the end of each day's run, and, having marked these points with a pencil for all the ten days, to connect them by a series of straight lines from the first to the second, and so on.

Difference in Time.

The difference of time between New-York and Southampton is just five hours, so that we have been getting ahead of our friends at home in that respect, a half hour every day. There is another fact in connection with the reckoning of a vessel at sea, which I never learned before; "the evening and the morning are literally taken to make the day—"Monday," for example, in nautical parlance being a term applied to that revolution of the earth, (perhaps I should write of the *ocean*,) which begins at 12 o'clock noon on Sunday. To all true sailors, therefore, it has now been Wednesday morning ever since to-day noon. This enables the officers to complete the log, &c., of each day, during the afternoon, closing up all their entries with the arrival of the sun upon the meridian.

Magnitude of Paris.

From the second letter dated at Paris, May 10, we make the following extracts:

PARIS is a large place. No one who has seen it, will accuse me of exaggeration in saying so. To those who have not, how shall I hope to convey an idea of the meaning of the words?

I think that some superhuman power, such as the slaves of Aladdin's lamp, must be in league with his Imperial Majesty, Napoleon III. I can imagine that with such aid, the wonderful additions that have been made within ten years past to the ornaments; the wonderful improvements in the streets, the structures, and the promenades—this perfection, everywhere in Paris, might have been achieved; that new highways might have been laid out, and lined with palaces, in the midst of alleys, or cut through solid blocks of buildings; that a population in the city proper (1856) of 1,174,346, or, including its suburbs, of 1,727,419, should be kept in such perfect order and supplied with amusements so constant; above all, that the public purse should have become, apparently, so like the widow's cruise of oil, sustaining, unexhausted, every draft, and when, to the faithless eye, seemingly near a final depletion, eagerly replenished by every confident soul who has a few thousand francs to loan on the credit of the Emperor and the country.

Perhaps we have the means in the United States,—if we could have the services of the wizards who build cities and palaces in the Arabian Nights,—to put together a city approximating somewhat to the realities here. We would despatch one of them to Washington first, and borrow its wide avenues, its "magnificent distances," its public grounds; we should take also its public buildings, but when they are all brought near enough together to represent the compact ranges of architectural device that adorn Parisian streets, they would not take up a very extensive area. Then for the more ancient parts of the city, we should send to Boston, and borrow the crookedness of its older streets, and to New-York for whatever of sinuosity and narrowness could be found in any of its byways. New-York should also contribute all its long lines of "brown stone fronts," and all its marble or freestone palaces of trade. Philadelphia should give us some of its general uniformity, all its neatness, its finest buildings, its cemeteries. Chicago, St. Louis, Montreal, and half-a-dozen other cities, should be laid under contribution, and then a magic touch should transform the aggregate into one harmonious whole, in which, while tracing the growth of centuries, you might yet see the evidences of some grand renovating and all-disposing hand, now constantly engaged in enlarging, rectifying, embellishing; but also —from the fact that the same kind of building stone has been always in use here—the power as it were of some one presiding genius from the very beginning, guiding the destinies of the place to make it rank in the 19th century at the head of all modern cities in its elaborate decorations and splendid edifices.

Its Streets and Pavements.

The Rue Rivoli, on which the hotel fronts, is nearly two miles in length. I have seen it all except a short distance at the eastern end, and for the whole length of all I have seen, (and perhaps the rest also,) there are gas lights on one side every 12 to 15 feet, making a most beautiful illumination in the evening. On the other side the lights are at intervals varying along the Tuileries and its gardens, from 20 to 50 feet I suppose, but some of the streets are lit on both sides as numerously as this is on one.

The pavements here are more perfect, and the streets cleaner than I ever supposed possible. I have been called to several very widely separated localities, and in passing backwards and forwards, must have traversed a good many miles of streets, and this among the oldest, crookedest, and narrowest, as well among the new and wide ones. I have seen no place where the walking was not as good, so far as cleanliness was concerned, in the streets anywhere, as on the sidewalk. The streets are many of them frequently sprinkled, but I have seen no dust when they were not, and many of the sidewalks are also sprinkled two or three times in the day, I suppose partly to make them cooler to walk upon.

Omnibusses and Voitures.

It is perhaps owing to the perfection of the pavements to which I have referred, that the horses here draw such loads. Two horses draw an omnibus, but constructed quite differently from those of New-York, for they accommodate *fourteen* inside passengers and *ten more on top*, beside the driver and conductor—a pretty good load. The city, too, is generally level, but I have been in one part of it where there was quite a hill to climb, and where a man stationed with a third horse, came and attached him in front of the other two to help them drag their load to the end of the ascent. When an omnibus is full, the conductor puts over the door a sign to that effect and won't stop for you, no matter how hard you beckon to him. There is one other good feature which appears to work most admirably. The fare in the inside is 6 cents, on top 3 cents, but all inside passengers have a right to what is called *correspond-*

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* The *distance run* is the number of miles made by the steamer during the 24 hours preceding the noon of each day, and *latitude* and longitude are each noon obtained by observation, showing precisely where the steamer stands at the moment the sun crosses the meridian:

	Dist run.	Lat. North	Long. W. frm Grwch.
1st day,	290	42° 1′	67° 38′
2d day,	312	42 45	61 10
3d day,	305	44 10	54 55
4th day,	295	45 34	48 17
5th day,	310	47 39	41 21
6th day,	304	48 56	34 18
7th day,	315	49 58	26 29
8th day,	331	50 1	18 15
9th day,	320	50 0	10 0
10th day,	330	At Cowes.	
Total,	3,112		

ance; that is, if you have to take two omnibuses to reach the end of your route, on paying your fare in the first, you get a ticket that carries you without any further payment in the second. The omnibuses are all in the hands of one company, and there are offices in every part of the city where they stop to take up and let down passengers, and where those having *correspondance* from one line to another can change. They also run lines of smaller vehicles, called *voitures*, in the environs beyond the city walls—the voiture, holding ten persons and drawn by *one horse.* One has the right of *correspondance* in these also, but there is an additional charge of two cents for the distance outside the city. It appears quite singular to the American to see one horse only before a hack or public carriage, very nearly as large as those of New-York. The vehicle probably most frequently seen, however, has but one seat in the inside, where two persons may ride very comfortably. Otherwise in general form it is much like our carriages. These cabriolets and carriages charge a price of from 35 to 50 cts. per hour according to their size. The drivers are a very well appearing set of men, and I have found them always polite and attentive.

French Agricultural Exhibition.

From the Third Letter we select the following extract from an account of a visit to a French Cattle Show:

After spending some days in Paris and its vicinity, of which more hereafter, I took an evening train for Nantes, which lies in a southwesterly direction, and at a distance of 265 miles—a journey by rail of a fraction less than 10 hours, (if one takes an express train,) and which I only made by night from the necessity of the case and knowing that I could return in daylight. The object of the journey was mainly to be present at what we should call a Fair or Agricultural Show, of considerable interest. Under the name of a *Concours Régionale Agricole*, an exhibition was to be held, open to competition from a "region" of eight "Departments"—the five, of which under the ancient division of France the province of Brittany was composed, and in addition those of Vendèe, Maine et Loire, and Sarthe—thus covering a considerable territory and a large agricultural population.

These "regional" exhibitions take place in considerable numbers at this season, probably covering altogether, although not in the same year, the whole of France. From what I have understood, there is annually at Nantes a show of fat cattle, but only at considerable intervals a show of the kind I have seen, including stock, machinery, and agricultural products. The exhibition—as I presume everything else in France, from great public institutions down almost to the very conversation of the private citizen—is directly under the supervision of the government. The "Ministry of Agriculture, Commerce and Public Works," has it especially in charge. M. de SAINTE-MARIE, "inspector general of agriculture," is the *commissaire général*, or as I suppose, nearly our "general superintendent" or "chief marshal" of the exhibition, and is in fact, I suspect, the sole head, although the Prefect of the Department is the *Président d'honneur.* There are five other *commissaires* or superintendents, respectively for cattle, sheep, out-door agricultural machinery, in-door machinery, and products. There is a board of four judges for cattle; another of like number for sheep, swine and barn-yard stock, (poultry and rabbits,) of both of which the commissary general is the president; two boards of four each, respectively for out-door and in-door implements, and a third for farm products, the president of the latter three being appointed by the Prefect. Farm machinery and products were received and classified on the grounds Tuesday and Wednesday, and the machinery tried the second day, the judges completing their examination of them the third day, after which on Thursday, admission to this part of the *Concours* was open to the public at one franc (say 20 cents.) The animals were also received and arranged Thursday, and examined by the judges Friday, after which admission to them was open also at one franc. Saturday the whole was opened to the public for an admission fee of ten cents of our money, and Sunday, which was the great day for the crowd, admission was gratuitous, and at noon a "session" of the Concours was held, at which the prizes were publicly declared and paid.

Thus much for the arrangements of the show, to which, however, I should add two items which were to me of vital importance, and must have been of great interest to everybody else. I wish most heartily we could have them at our shows. First, to every animal and every machine there was attached a medal with a number, and there was a printed catalogue which contained a complete list of all, numbered to correspond. This catalogue was sold for 5 cents a copy, and in itself was worth double the price of admission to one who really wished to know what there was to see. Second, there was offered for sale at the same price Saturday morning, a complete list of the prizes awarded. This, although a matter of no little convenience, was practically less important, because notices giving the class, catalogue number, prize awarded, &c., had also been affixed to everything which had received either a premium or an honorable mention. When the visitor has thus the means of knowing clearly what it is he is looking at, such an exhibition becomes doubly instructive, especially when he can also determine the comparative merits of all and each, with light afforded by the judgment of those selected to decide officially upon them.

In the catalogue of the show itself, CATTLE in their various "categories" begin the list. Of those indigenous to France, there were three classes. The *First* included the "Nantais, Parthenais and Choletais" breeds, different names I think of much the same stock, derived probably from the different localities where it has flourished. The prevailing color among them is a kind of dun, verging sometimes toward a yellowish white, and at others becoming a light brown—these different shades often blending in different parts of the same animal, and while catalogued as red, pale-red, yellow, yellow-red, brown, bay, sorrel, and under quite a further variety of terms, in many cases really manifesting between themselves a variation of hue almost imperceptible. An exception to this, however, is the gray color quite prevalent among the *Parthenais*, and occasionally showing itself in the others, while notwithstanding that which I have before described, with its slight modifications, gives the stock a general uniformity, and is often combined with a skin of a creamy yellow tinge that puts one in mind of rich milk and good butter. The horns are delicate, of medium length, and, with very rare exceptions, tipped for a few inches with black. The face is well shaped, and the eye as intelligent and fine nearly as that of the Alderneys. They are tolerably symmetrical in form, but I saw few or no evidences of that systematic breeding with a view to its improvement, which has brought the contour of the Devons, for example, to such a degree of perfection. In size I doubt whether the Devons or they would turn the scale. One would, in fine, judge them to be of a hardy, serviceable race, giving in proportion to their consumption probably a fair return of milk and labor, and some good beef.

In this class there were shown no less than 63 males and 48 females—a larger number than in any other, which, together with the fact that afterwards in a long drive out into the country from Nantes, I do not think I saw one apparently of any other sort in the fields or roads, leads me to presume them to be the most universally in use, if not the most generally esteemed in that part of France. The prizes offered were of generous amount, as follows: Four prizes for bulls from 1 to 2 years old—respectively,* $120 and a gold medal; $100 and a silver medal; $80 and a bronze medal; $60 and a bronze medal, and the same medal for two more animals, receiving a first and second "honorable mention." The same prizes were given to bulls over two years old, these two being the only division of the males as regards age on the list. The females had three divisions—those between one and two, those from two to three, and those over three years old, and the prizes offered for them run from $20 up to $80, each accompanied as above with a medal.

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* This is counting 5 francs as equal to one dollar.

The *Second Class* on the list was the *Breton* breed—one which in color, abounds mostly in black or black and white, although there was here and there a specimen of red and white among them. I remember one heifer especially, which I thought would have taken a prize, perhaps because in preferring her color I overlooked defects which the judges discovered, for I believe they did not even award her an honorable mention. The first prize yearling bull entered as "sorel," was also nearer what I should call red and white; he did not appear to me quite equal in quality to some of his competitors, for as regards the softness and nice handling of the skin I thought the Bretons generally pretty good. I am told since the show that they are considered, perhaps, better for milk than the Nantais, while the latter are most highly esteemed for work. Their yield of milk, however, was said not to be very large; 12 to 15 or 16 *litres* per day, perhaps 1,500 per year, being outside of the average. (The *litre* is a small fraction more than our quart.) The first prize cow, 5 years old, black and white, was small, with fine bone, a horn slender and quite long, but a neck like a bull's in coarseness and weight. The neck is one of the ugliest features in the Bretons and some other breeds classified below, while, if I remember, in the Nantais it is generally clean and handsome.

Of the Bretons, there were shown 22 males and 44 females; the prizes were from $40 up to $80 for the former, and from $16 up to $50 for the latter—a very considerable reduction, as will be noticed, upon those offered in the preceding class.

The *Third Class* comprised all French races, not before included, and I find the following on the list: "Manceau, Cotentin, Maraichin, Salers and Bordelais." Of the five breeds, however, there were only seven bulls and eight females on the ground. Two bulls of that first named took the highest prizes offered; the one 14 months old was of fair size, I should think, for his age; his back had a concave bend—a defect quite common in many of the other breeds; he was heavy under the neck and head, but had a skin of rich color and fair touch. The other, 3½ years old, had blinders over his eyes, as though he might be ugly in disposition; he was clean limbed, but stood lower in front than behind, giving him also a hollow look in the back, which might otherwise have been quite straight. He had considerable good meat, but a neck that for size would not have disgraced a buffalo. The prizes in this class were of the same amount as in the second, but only a part of them were awarded.

This rough outline of some of the French races of cattle will only convey an exceedingly imperfect idea of them to the reader. Without having received that homage which art has been paying to the domestic animals of Great Britain for more than fifty years, they cannot, of course, be judged by the same standard as breeds the improvement of which during such a period, has been the constant task of intelligent effort. But do not they offer at least a starting point for similar efforts? Indeed such experiments may now be progressing, of which I am ignorant; the high prizes awarded by the government should certainly stimulate them. The only question which the French farmer has to decide is, whether in the end it will be his better policy to have perfected the native races of his country until they equal those of any other, or on the other hand to have taken the mode, (which certainly seems the shorter,) of crossing the best foreign breeds upon them, and so availing himself at once of the improvements already made in other countries. If I might hazard an opinion, it would be this,—that while the latter may be a source of present gain, it is to the former he must turn for a more real and abiding advancement.

In the SHEEP there was little or nothing to notice specially. There were some good South-Downs pure, but the show consisted mostly of crosses of South-Downs with Cotswolds, and various other mixtures—with much less of the Merino blood than I expected—the class devoted to the latter (pure) having in it but one single ram, and for this fact I am relying on my catalogue, as I didn't discover him on the ground.

Nor shall we find among the SWINE anything very rare. The indigenous breed shown, was a heavy hog, affording, I should think, a good frame for improvement, but not as well filled out as the best English large breeds, which have sometimes attained a surprising bulk of flesh. The English hogs of pure blood on exhibition were "Middlesex" and "New Leicester," with one lonely Berkshire, and there was a third class, composed of cross-breeds.

The POULTRY show included 85 lots, in relation to which my catalogue lies before me with various memoranda of merit, demerit and description, which in the fullness of this letter I will spare to the reader whose courage has carried him thus far. Suffice it to say that admirers of the Asiatics could probably have selected something to suit them, while other varieties were not altogether thrown into the shade, and a few ducks, two pens of geese, one of turkeys, and quite a small assortment of rabbits made up the "tout ensemble" in this department of the *Concours*.

The Prizes offered for the animals were certainly very generous, amounting for Cattle to $5,000 or a little more, and for Sheep and Swine to nearly $1,200—besides the medals which accompanied all the money prizes, and the large number of bronze medals which were given as a token of honorable mention. About $80 with numerous medals were divided among the exhibitors of Poultry, and about $100, in sums of from $5 to $16 each, as I understood, to meritorious herdsmen or other farm laborers who had lived with their employers for various specified periods of time.

But far the largest of all was the *Prime d'Honneur*, awarded for the best conducted farm in the "region," on which improvements had been put in practice the most useful and important, and the most fitting to be held up for example to others. This magnificent prize was $1,000 in money, and $600 in plate. I do not know the conditions of the entry, but each competing establishment had been officially visited and examined before the award was made.

Of Agricultural Machinery there was a large show, and that of Implements was also extensive. The former consisted largely in Portable Steam Engines attached to thrashing machines, Stationary Engines of several patterns, Thrashers to go by horse power, generally with the *manège*, or lever apparatus, moved by the horse or horses, all connected in one frame, some few Harvesters, &c., &c. Among the Implements, were plows, horse-hoes, root-cutters, draining utensils, harrows, and so on—some of them much like our own, and some also which I have the vanity to think not so good. The large number of steam engines shows that considerable attention is now given in France to the employment of this power, although Nantes is a place in which machinery of all kinds is largely manufactured. The one which took the first prize was of six-horse power; the price was $1,400, which is higher in proportion, I think, than that of most others shown; the cylinder, &c., were under the boilers, and there were two driving-wheels, on which the engine, when not in operation, could rest its weight, and by them, and the guidance of a team in turning the fore-wheels, furnish locomotive power for its own transportation from field to field. There were some implements shown of English construction.

M. de SAINTE-MARIE, to whom I had a letter from Paris, was good enough to give me the liberty of the grounds, and also provided me with a ticket for the distribution of prizes, which, as I have said, took place Sunday afternoon. After waiting its commencement a little while, the dignitaries of the occasion finally entered in procession, took their seats upon the stage, and the band just outsido opened with some preparatory strains. The uniforms and such exterior personal decorations, were, I think, a good deal more abundant among these official gentlemen, than the militia titles which we are laughed at for having in such profusion, would have been at a similar meeting at home, while the bearers of the latter would have presented themselves in civilian apparel. The platform had along its back and sides a staging of flowers, with hangings of "imperial purple," velvet bordered and adorned with gilt; the tri-colored drapery of the national flag was of course in sight; evergreen festoons hung along the roof, with here and there suspended a fine bouquet; the interior was filled with chairs, none of which lacked occupants, while the crowd also pressed round the outside to know what was going on. Monsieur the Prefect opened with a very nice little speech, of which I can say with one of the city dailies, that it was "happily conceived and warmly heard; tracing out the merits and the glories of that French agriculture, which creates at once both the wealth spread abroad throughout the country, and its race of working soldiers always ready to handle with resignation and with heroism, either the plow or the musket." The speaker also added some words in praise of the principal exhibitors, mentioning a few of them by name, and closed with a short reference to the hostilities in which France is engaged, and in eulogy of the Emperor. The report awarding the *Prime d' Honneur* already mentioned, was then read, which also included a recommendation of four medals to other proprietors. The prize list was next in order, each fortunate recipient coming forward as his name was called.

Rural Economy of Switzerland.

From his fourth letter, dated at Lausanne, Switzerland, May 30, we have only room for two or three paragraphs.

I observed evidences of careful husbandry, which I wish I could have had the opportunity of seeing better. Among them should be mentioned the irrigation of the meadows, carried on by means of trenches with just sufficient descent to allow of the gradual flow of the water, and to admit of its being spread from time to time, as desired, on different parts of the fields. The grass was thick, fine, and very green, and one can easily see how three crops a year may thus be obtained, as it is said they are, on bottom lands fertilized by the mountain torrents. Fertilizing materials are also saved both in city and country, with economy; children are constantly seen in the streets and roads, with baskets and little wagons, collecting everything that can add strength and value to the manure heap; and a little later, in going by *diligence* across the country, I saw laborers at work watering some meadows with a liquid preparation, the odor of which might have attested its beneficial use—carried in a cart-vat, and distributed by them with pails or pans. In all the meadows there is a profusion of flowers—some dandelions, butter cups, and other familiar visitors in our own fields, with others still more numerous, which I did not recognise. I was assured, however, by several with whom I exchanged a few words in the *diligence*, that they were indigenous, and regarded as useful plants, instead of being considered as weeds and intruders.

Merket at Lucerne.

Thore are several open, arcade-liko cellars facing along the water, where the markets are held, through which we had an interesting walk—the part devoted to meats being as sweet and clean as possible, although the slaughtering was apparently done close by. Then we came where the stands were occupied with the productions of the kitchen garden, and now and then some simple flowers, both wild and cultivated. Peasants from farther away were stationed about with paniers of vegetables, and others with baskets and tubs of butter, waiting with the most perfect nonchalance the coming of a purchaser. There were also tables of cheese, and some cheeses were cut for sale in retail, and however good these cheese may have been, I liked not their savour. There is a different odor unto different manufactures of cheese, and different tastes among the purchasers thereof; I doubt not, therefore, that this cheese of Lucerne found its willing buyers, and some nose glad to smell, as well as mouth to eat.

And, outside, it was morcover a general market-day, and the boats from the lake shore brought in large sacks of potatoes and somo other prodnce, and the patient cattle from the conntry back, contributed also, and I suppose that the buyers of Lucerne laid in their stock of a week's provisions, amidst the stir and activity of that Tuesday morning.

Yoking Domestic Animals.

About the working of these cattle let me say a few words in conclusion for the present, for I find that one letter will not go so far as I had hoped toward the narration of my Swiss experiences. I have seen yoked all kinds of combinations – two cows, two oxen, two bulls—a bull and cow, and each singly, like a horse—before plows, before carts, before wagons, with yokes pulling from the horns, yokes pulling from the back of the neck, and yokes with hames like collars. In that part of France I visited, the universal system appeared to be to draw from a yoke strapped to the horns, and this seemed far more natural and easy for the cattle than I had supposed, perhaps quite as much so as the ill-fitting, ever chafing bows one frequently finds with us. Singly, however, the cow or ox was often in regular horse harness. Here, there is a kind of yoke resting on the back of the neck, which does all the pulling, there being merely an apology for a bow on which there is no strain, to hold the yoke in place. This often appeared to cut badly, and was if possible worse than our own way—of which I do not remember having seen as yet a single example.

Castrating Colts.

In answer to an inquiry, "as to tho best time to castrate a horse—age, season of the year, manner of performing, and after treatment,"—I answer:

1st. Best time—in mild, dry weather.

2d. Age—two or three. I prefer three, when the horse can be put in a pasture away from tho mares—two, if not.

3d Season—spring.

4th. Manner—make a couple of clamps of elderwood, about an inch thick, and five long; strip off the bark, split in two, take out the pith, slope the end from the inside outwards one inch, cut a notch around each end to confine the string, in order to tie securely; take half an ounce of corrosive sublimate powdered fine, mix with tallow to a paste; fill the hollow of the clamps with this, then fasten the ends together with a string in such a way that the other end will be one inch apart; in that position tie them fast. Now throw the colt, and tie him, roll him on his back, grip his testicles firmly, cut the skin of the bag, and take out the stone; put the clamps on the cord, press tight, and tie fast the loose end of the clamps, then cut off the stone close to the clamps. Let them be on till the netx day, then cut the strings and take them off

5th. After treatment—we never have any. C. T. Doy. *Lawrence, Kansas.*

Long-Island Lands.—I am residing on Long-Island, about two miles from North Islip station. These "barren lands"—so called—are fertile and productive, and where they havo been cleared and manured, produce luxuriant crops. We have as fine strawberries as can be found anywhere; and one of my neighbors has a peach orchard of nine acres, which for excellent growth and good bearing, cannot be beat. People had better purchase these lands instead of going west, the climate is so much better, and produce can be taken to New-York market every day. J. A. Lawton. *Hauppauge, L. I.*

Poor Man's Cow Stable.

EDITORS CO GENTLEMAN—You have opened the door so wide, and invited the "halt and the lame, and the blind," that it is very likely some unworthy scribblers may seek admittance to your pages. But while Messrs. Editors sit as masters of the feast, we have a guaranty that no guests shall be received unless wearing, albeit in humble guise, the badge of the husbandman. At least I hope that this "favor" will be tested in the editorial crucible, and if "found wanting," pray do not allow it to encumber your valuable columns.

As the object of your paper is to aid and benefit the farmer, it may not be out of place to give, through its columns, a description of the stable, built since Christmas, which in its accommodations and manner of construction is adapted to the wants as well as to the *purse* of the poor man. It is probable there may be some among your readers who would be glad to increase the comfort of their animals, and add to the convenience of their buildings, but have not the *cash* to build with

I have been for the last two years a subscriber to your excellent paper, and for a considerable time before of THE CULTIVATOR, and have obtained much instruction from their pages. A great embarrassment has always been the want of means to carry out the practice of their advice; but I am satisfied the class of farmers spoken of above, who most need their counsels, will not and ought not to read them in vain, without finding plans and methods of improvement in the various details of the farm, adapted to their circumstances and necessities.

My barn, somewhat akin to Squire Slipshod's, is "30 by 40," more or less, having a thrashing floor near the centre. The main doors which enter this floor are narrow enough to leave a space at one corner of the floor where a door may be cut through the siding of the barn The cow stable is built in the form of a leanto on the side of the barn, so as to be entered and fodder thrown in from the barn floor by this door—the entrance for the cows being from under an open shed at one end of the barn; where also the cleanings of the stable are carried out on a wheelbarrow, and mixed with that from the horse stable. The fodder when thrown in from the barn floor falls into the feeding passage in front of the cattle, which stand in stanchions.

There is a gutter close behind them which receives all the droppings, preventing the cows from besmearing the udder and teats, much to the satisfaction of the milker, and the comfort of the animals. The passage behind them, including the manure trench, is about three feet in width. The trench is 15 inches. The stanchions, as well as all other parts of the frame are made of poles from the woods, and easily made smooth by peeling off the bark. It might be more easily and readily made of sawed lumber, but I am writing this for the benefit of those who must use that which costs little money. The roof is "*shingled* with straw," after the manner of thatching, and the rope yarn used for this cost about 88 cents. This with nails was the only money expense in my case—not exceeding a dollar and a half in all, including a small glass window at each end of the feeding passage. Some temporary stables built a few years ago, and now pulled down, furnished lumber for the siding—about 400 feet, and plank for the floor. These newly purchased would cost $10. Very few nails or spikes were used, except for nailing the siding—most of the posts being fastened with wooden pins. The doors slide behind cleats at top and bottom, and have no hinges. Altogether a rude affair, it is true; but quite as convenient and comfortable as many an *edifice* of greater pretensions.

There are seven stanchions in all, moved all at once by a straight pole, to which all the movable stanchions are attached at the top by a four inch carriage bolt through each—the seven bolts costing 17 cents, which may be added to expense stated above. When the stanchions are pulled up to their place in fastening the cattle, a button drops into a notch in the top of the pole, holding it securely, and no careless hand can leave it unfastened. My boy eight years of age often turns the cattle in and fastens them.

The siding is put on clapboard fashion, and there is an arrangement for admitting air and light by having, at about three feet from the floor, a board fifteen or eighteen inches wide hung at its lower edge by leather strap hinges, which are put on in a way that cannot pull off. There is a row or tier of these all round; any one or all of which can be opened or closed at pleasure. This ventilation would be necessary in case the stables are used in soiling cattle in warm weather. We have found dry chaff to answer a good purpose, in the absence of a better material, as muck or sawdust, for filling the manure trench to absorb the liquid manure. SLIPSHOD, JR. *Niagara Co.*

Experiment with the Currant.

MESSRS. EDITORS—It is conceded by all that the currant is a valuable fruit; nearly every family who cultivates a garden, have their "row of currant bushes." I find by practical demonstration that their growth, fruitfulness, early or late maturity, is much influenced by different modes of culture. I find that by constraining them within limited bounds, answers a good purpose. In the spring of 1852, I set cuttings of the currant close to my dwelling house, on the north end, and east side. These cuttings I have cultivated and trained to suit my fancy—they may now be termed *trees* instead of *bushes*. Some I have pruned off nearly all of the lateral branches. Of these the tallest now stand over *ten feet in height*. Before setting, rub off all the buds from the cutting, except one or two at the top. As they advance in growth, they require some support, and must be nailed to the walls of the house, with straps of leather to clasp over the main branch, and tack with small nails; this will keep them in an upright or any position you please, for you can train them in most any shape to suit the fancy—"just as the twig is bent, the tree is inclined" Trained over the window, we have quite an ornamental *window-blind*; and when the fruit matures, and the luscious, crimson berries hang in clusters, I think them more ornamental and more useful than the "Woodbine" or the "Eglantine."

By training my currants as above stated, I find they attain a much larger size, resembling cherries nearly, and the fruit more delicious Those trained on the east and south walls, ripen *early;* and those on the north *late*. These retain the fruit on the trees fresh and good until the hard frosts of November. Another advantage is, the fruit is out of the reach of the fowls, which devour many on the low bushes.

I have in contemplation a suitable trellis, which may be constructed as an enclosure for the garden, on the north or south sides; say construct a close board fence, eight or ten feet high, or as high as you wish to train the currant. Select durable timber for posts, of suitable length; set 12 feet apart with girts, and nail on the boards in an upright position, on each side if you please, and well capped. Plant cuttings of the currant at suitable distances on each side of this fence, and you have a convenient trellis to train them to. Those on the south side will ripen *early*, and those on the north *late*. Such a trellis, well constructed of durable timber, and well painted, will last many years, and will combine the *ornamental* with the *useful*. L NORRIS. *Windsor, Ohio.*

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LAWRENCE CO. FAIR.—The Eighth Annual Exhibition of the Lawrence (Penn.) County Agricultural and Horticultural Society will be held at New Castle, Pa., September 20-22, 1859. Among the premiums offered, we notice twenty copies of the COUNTRY GENTLEMAN.

Young Cherry Trees—Timely Hint.

Those who have set out young cherry trees the present season are generally pleased with their promising appearance and new foliage. Many of these planters will be sadly disappointed about midsummer to find that a large number which have appeared in leaf and grown two or three inches, will wither and die. This will be owing to the dry soil and parching air. Some will attempt to remedy the evil by watering; but this, generally, will only harden and bake the crust, and do more harm than good. As a general rule, more young cherry trees die that are watered, than otherwise. If the surface earth were removed, the water poured directly on the roots, and the soil replaced, the watering would be better. But the supply would be variable,—the roots wet now, and dry again next week. To prevent all these unfavorable influences and save all the trees, make the surface mellow, then apply a mulching consisting of at least six compact inches of old straw (or other litter) forming a circle six feet in diameter. This will preserve a uniform degree of moisture, and prevent the heating and baking of the soil and save the trees.

Herbert's Hints to Horse-Keepers.

This is one of the most attractive works ever written in relation to this subject, and on which its celebrated author possessed such a vast fund of information. Its mechanical execution exhibits the same perfection of art, which distinguishes all the recent publications of the enterprising firm of A. O. Moore & Co. of New-York. Its numerous outline engravings exhibit a very near approach to perfection in accuracy.

It not only treats of horses, but of the various subjects with which they are connected. It furnishes ample instruction, not only on the selection and breeding of horses, but the reader is amply informed how to buy one without being imposed upon; and after the horse is bought he is told how to feed and take care of him; of the best kinds of food, and of the best kinds of stables; how to keep a horse in health, and how to cure him when he gets sick; grooming feeding, driving, breaking, shoeing, riding, saddling, harnessing, reforming, &c, are all examined; but the author promptly refuses to give any information in relation to docking and nicking, for which he thinks there is no excuse. Ample directions, with illustrations, are given for ladies riding—as well as the Rarey and other modes of breaking and educating furious colts. The management of working horses is not overlooked, including the modes of attaching horses to the plow. A valuable and interesting chapter is furnished on the construction of carriages, and how to judge properly in buying one; and another on harness and its management. Some of these chapters, although not written by Herbert, add much to the value of the book.

The following brief facts we have taken variously at random, in looking through the work:

"A desire for ornament or a fine appearance, should never lead you to buy a fine carriage for a vehicle of all work. A 'shabby gentility' will be the result after the gloss is worn away."

"Ammonia from a stable will destroy the varnish of a carriage in a short time."

"At least once a month place a wrench on every nut on your carriage."

"Almost every wrong act a horse commits is from mismanagement, fear, or excitement; one harsh word will so excite a nervous horse as to increase his pulse ten beats in a minute."

"Not only is it not true that speed alone is the only good thing derivable from blood, but something very nearly the reverse is true."

"Blood from the sire, beauty from the dam, is the golden rule of the breeder."

"We know it is commonly said by farmers, concerning some miserable, under-sized, ewe-necked, cat-hammed wretch of a mare, broken-winded, ringboned and spavined, 'Oh, she will do to raise a colt out of!' So she will! But what will the colt be? Not worth the mare's grass."

"It is never safe to take it for granted that the seller of a horse is an ass, or is not aware of the worth of his merchandise. To get a good horse, one must expect to pay a good price."

"A remarkable bargain in horse flesh is always suspicious, and the greater the bargain the more suspicious it becomes."

"More horses have their wind broken by being worked quick and hard, with their bellies distended with hay, grain, and water, than from all other causes combined."

"Always remember, in using a horse, that it cannot be done with too much coolness, too much gentleness, too much discretion, or too much kindness."

Egg Drops.

Messrs. Enitors—Here is a recipe which my wife sends you to make a very fine bread, especially for farmer's use.

Take one quart corn meal—pour a sufficient quantity of boiling water over it to make a thick batter—then add one tablespoonful of lard, salt to suit the taste, and three eggs. Then stir up well and drop a tablespoonful in separate places on a griddle or spider previously warmed and let them cook brown. You will find them excellent; just try them yourselves. V. B. B.

Drying off Heifers.

Messrs. Editors—In the Co. Gent, of the 3d Feb., D. M. N. inquires, "would it be beneficial to dry off a heifer after her first calf has been disposed of." From my own experience of thirty years I should say decidedly no! If a heifer is expected to make a good milker in after years—that is, to continue to yield milk for some months—let her, after her first calving, be supplied with nourishing and succulent food; milked with care, stripping her to the last drop, and her milking continued as long as she will yield anything, if but a gill, or up to a reasonable time of her calving, say six or eight weeks. I have invariably found the length of time a heifer is milked establishes the time for her to fail in after years, notwithstanding all the care that may be given her. A Jamaica Plain Farmer.

Bees in Latitude 44° 34'.

Mr. Charles Booth, an agent for our Journals at Lyn, C. W., writes: "If you please, at a future period I will give my management and success in bee-culture, which in substance is that recommended by "Quinby," simplified 50 per cent in the construction of the parent or main hive, and in some degree the upper box, by which construction and management my annual loss of bees is limited to one per cent. I get one good swarm from each old stock annually, (I want no more,) and yearly of beautiful white surplus honey, an aggregate amount equal to forty pounds per stock, old and young.

I am in 44 deg. 34 min. north latitude. I have often seen mercury at 38 degrees below zero, and here I do not believe bees would freeze to death in the open air with proper ventilation. Yet I keep mine in the cellar from 1st of December to 1st of March, and have better success than when I left them out all winter. I think a low uniform temperature and exclusion of light, producing a uniform torpid state of the bees, more conducive to success than in the open air, exposed to sudden changes from hard freezing to rapid thawing, and bright sunshine to chilling winds during the winter months."

Inquiries and Answers.

USE OF WASH AND HOUSE SLOP.—Can you inform me through your paper on the following point, viz: What can be done with the *greasy* sink wash, mingled with chamber-wash, &c., from a dwelling, to make it of value in a garden? My drainage now passes into a cistern set deep in the ground, but I wish to pump it out from time to time, and make use of it. Greasy water, I believe, affects most garden crops unfavorably. SUBSCRIBER. *Exeter, N. H.* [Add *ashes* to the greasy water, and it will become soluble and capable of being diffused through the soil. It would be better if this mixture were kept separate from the other liquid, or the greasy water added to a compost heap, of which ashes forms a small portion.]

JUNE GRASS.—Inclosed I send you a specimen of grass which is very common in this vicinity, but I can find no one that can tell me what the name is, or where the seed can be obtained. Will you please inform me through your valuable paper, where I can obtain the seed, and at what price? It is one of our best fattening grasses. A SUBSCRIBER. *New-Milford, Ct* [Grasses, which, like the specimen sent, have but just headed out, and before the form of the spikelets is developed, are more difficult to recognize than afterwards. The specimen is also shrunken and withered. However, it is very evidently the *Poa pratensis*, the June or spear grass, and known at the west as the Kentucky Blue grass. It grows more luxuriantly there than at the east, which has induced some to believe it not identical with the June grass. The seed may probably be had at J. M. Thorburn's, 15 John-st., New-York. The price is variable—but usually about the same as timothy seed.

SAWDUST MANURE—ANALYSIS.—There is near me a large quantity of partially decayed sawdust, bark, &c., (pine.) I have used some of it this spring for mulching fruit trees, and it appears to answer a good purpose. Could it not be turned to some beneficial account as a fertilizer also? It appears to me so. How, or by what management, would you, or some of your numerous intelligent readers, recommend as the best? What is the usual cost of a chemical analysis of a sample of soil or manure? R. *Franklin Depot, Va.* [As a general rule sawdust is not very valuable. When thoroughly decayed by a few years exposure in a heap to all weathers, it is nearly or about equal to common leaf mould. In this state it forms a good compost with common manure, or if dry, may be applied advantageously to cattle yards as an absorbent of the liquid manure. It is more valuable if reduced to charcoal, which may be effected by mixing it with shavings, brush, &c., covering with sods and leaving air-holes, and burning as for common charcoal. On heavy clay, sawdust well worked in, operates as a loosener. Soil analyses are advertised by some for $5 to $10. Prof. Nash says there are not probably twenty persons in the whole world who can analyse soils "*reliably*," and $25 is probably the least sum for which an analysis could be procured from those competent chemists.]

SWINE IN ORCHARDS.—Does the permitting of hogs to run in an apple orchard injure the trees, even if they *are* wired? The orchard is about fifteen years old. I hear it said that the rubbing of a hog against an apple-tree is very injurious to the bark, and will in the end kill the tree, whether it be a big or a little one. In the days of our fathers, I don't think they would have killed it, but now a 'days there is no telling. D. [All animals rubbing against *small* trees, tend to sway them about, and to loosen them in the soil. A hole is thus made about them, and they become dried at the roots, and if the rubbing is continued, they usually perish. Hence small street-trees, if not well protected, nearly always die. We have never known hogs to injure large well established trees by rubbing against them, nor are we aware that any coating of oily matter thus applied to the bark has proved injurious. We have however known large trees to be destroyed by hogs tearing off the bark with their teeth; and have always regarded it as safest to protect all the trees among which hogs run, by tying about the foot, branches of sweet briar or trimmings of the Osage Orange.]

A CONSTANT READER.—Our advice is that you invest your surplus funds in a few acres of land near your residence, where, without hindrance to your business, you can superintend its improvement and planting, and the erection of the buildings you require. For cost of buildings and fences we must refer you to some carpenter in your neighborhood.

BAROMETERS.—In answer to an inquiry made a few weeks ago, we can inform our readers that HEMINWAY & GIBBARD of Auburn, N. Y., make barometers, which so far as we have examined, appear to be excellent ones, at $10 to $20 each—the former answering well for the use of farmers.

DESTROYING SKUNK CABBAGES.—I have a meadow of some ten acres, which, with heavy manuring, yields a stout crop of English hay. The Symplocarpus feticus, (Skunk cabbage,) abounds in it. Will it in time die out, if we eradicate the roots as thoroughly as possible every year? Will the plant spring up from little fibres of the main root which may be left? Is there any way to destroy it, except to dig up the roots with a spade and carry them off from the field, which is very expensive? LEWIS G. LOWE. *Bridgewater, Mass.* [We have no experience, neither in raising nor in exterpating the Skunk cabbage, and would call upon our correspondents for information. The small fibrous roots will not grow.]

SANFORD'S MILL.—Please give me your opinion of Sanford's Portable Farm Mill, for grinding feed, plaster and bones. I have a steam engine to grind bark for my tannery, and should like to grind four or five tons of bones, and likewise my feed for my farm stock, each year. J. JILLSON. *Whitehall, N Y.* [We have had no experience in the use of this mill. If any of our readers have tested it thoroughly, we shall be glad to hear from them.]

WATER TROUGH.—A correspondent asked, some time back, for the best water trough for a farm yard. Where lumber is not cheap, I believe a galvanized iron trough is in the end the most economical one. Six years ago I had a large trough for my farm yard built, of yellow pine, boards 3½ inches thick. It was stayed with iron bolts and nuts, and well grooved and jointed together. From the constant dampness underneath the bottom plank, last year that part of it had rotted. Its cost was nearly as much as an iron one would have been. D.

CRACKED HOOF.—Allow me to inform J. S. R. that if he will take his horse to the blacksmith, and have a nail put through the hoof and clinched, so as to prevent it from working when the horse travels, he will find it to be better than to spoil his horse with the chisel, as recommended by A. F. or J. W. F. I think there is great danger in cutting, as the foot of the horse is a very complicated part of the animal. The clenching will be effectual, if well done. If one nail will not hold it firm, put in two—put one as near the hair as you can and have it hold and not crowd the quick. W. H. C. *Providence, R. I.*

IRISH SMUTS.—I should like to know if any one can tell anything of the origin of a breed of sheep known and raised in New-England for more than sixty years, and called "Irish Smuts." They have been bred more than that time in the valley of the Connecticut. They are large, very good shaped sheep, with brown or "smutty" faces and legs. Having had recent occasion in delivering a lecture on sheep husbandry, to examine critically into the history of sheep, I find no trace of their importation, nor any Irish breed from which they could have sprung. J. S. GRENELL.

ROARING IN HORSES.—Can you or any of your correspondents inform me through the CULTIVATOR, of any cure for the thumps in horses? W. R. *Nebraska City*. [The disease which our correspondent refers to, is doubtless a modification of that commonly termed roaring. We believe it is usually hard to cure, but a thorough knowledge of the cause must first be obtained. Dr. Dadd remarks that if the difficulty be at all removeable, there is no better way to accomplish it than by improving the general health of the horse, in the use of proper diet, expectorants, and relaxents, and by steaming the nasal passages. Perhaps some of our readers can furnish a remedy for this disease; if so, we will gladly insert it.]

Lice on Cattle.—Can you give me a remedy for the removal of blue lice from off my cattle? A Subscriber. *Albany*, *N. Y.* [It is seldom that lice trouble cattle at this season of the year, for if they can have access to the ground and lie down in the dirt, it will usually eradicate the lice. A safe and effectual remedy, which we have used with perfect success, is to give the animals a thorough washing with strong soap-suds. This, repeated two or three times, at intervals of a day or two, will do the business.]

Coal Tar for Shingles.—Can you or any of your correspondents tell me whether coal tar is a good article to put on the roof of a barn, to preserve the shingles, &c. Harry. [Coal tar is an admirable preservative of wood, but a strong objection exists against its application to shingles, namely, the great heat which it occasions has the absorbtion of the sun's rays. Roofs, the exterior portions of buildings, and all implements exposed to the sun's rays, should be of some light color, that will not become heated, crack, and warp in the sun. Any wood structure or vessel, not exposed to the sun may be preserved by the use of coal tar, better and cheaper than by the use of any other application we know of.]

The Mole.—Will you or some of the readers of the Cultivator, answer the following questions—How can meadow moles be destroyed? What do they live upon? Can they be taken in a trap? What should the trap be bated with? Where should the trap be set? I have a piece of upland that has been in corn and vegetables three years; last fall I manured it with stable manure and plowed it in. This spring I plowed it again, and set out cherry stocks, and a small piece I sowed with onions, and the moles have been through the ground in every direction. I don't know as they have done any harm to the cherry stocks, but they have riddled my onion bed thoroughly. Any information upon this subject will be thankfully received by one who reads the Cultivator. Joseph E. Phelps. *Worcester*, *Mass.* [The American Mole or the Shrew-Mole of Dr. Godman, is undoubtedly the animal referred to by our correspondent. Dr. Godman and other writers strenuously urge that the mole does more good than harm by the multitude of insects which it destroys—an opinion with which most cultivators will hardly coincide; at all events those who live in regions not infested with them, will probably rest satisfied without their introduction. The mole is destroyed by poisoning and by traps. The poison, (arsenic or strychnine,) is applied on fresh strips of beef, strewed in their holes, and it is said they will not be eaten unless soon found. Another mode is to apply it in grains of corn, by raising the skin of the soft part with a knife, scooping out a portion of the soft part and filling the cavity with arsenic. Another is to stick holes into a potato with a sharp stick, and put arsenic into these holes. Their tunnels are opened at the freshest part, and these are dropped in. The mole is also caught in traps, but we are unable to describe the best, as we have had no experience in this way. Will some correspondent who has had, please give us the benefit of his knowledge.]

Wen on an Ox.—I would like to know if there is any cure for an ox whose jaw is much swollen. I have a three years old steer, the bone of whose jaw has enlarged very much the last six or eight weeks; it appears connected to the fork of the under jaw. Jno. M. E. Valk. *Meadow Bluff*, *Greenbrier Co*, *Va.* [In a former number of the Co. Gent., Mr. J. W. Clarke of Wisconsin, gives a receipt which effectually cured an ox in his possession having a wen on the under jaw. It was a salve of soot, spirits of camphor, turpentine, and soft soap, in no very exact proportions. Apply three times a day, the wen being rubbed thoroughly before as well as after applying the salve.]

Green Food for Cows.—I wish to make inquiry through the Co. Gent., as to the best crop to sow for green fodder,(to feed milch cows,) to sow the latter part of June. W. H. B. [We know of nothing better than Indian corn. If any of our readers know of a better crop for the purpose, we shall be glad to hear from them.]

Maggots in Onions.—Can you give me any remedy for the worm or maggot in onions. A. Smith. *Ware*, *Mass.* [There are said to be two or three generations of the onion flies during the summer. The late Dr. Harris, in his work on *Insects*, recommended pulling up the onions as soon as they turned yellow, and putting them into the fire. This would doubtless be effectual in some degree, but a portion of the insects would of course remain in the ground through the winter. Measures should therefore be taken to destroy the maggot while in the pupa state in the soil. On small spots of ground, this may be effected by a free use of hot soap suds, or a good dressing of ashes, salt or lime, to be applied in autumn, so that the rains will dissolve the potash, and thereby perhaps destroy the tender pupa.]

Quinby's Mysteries of Bee-keeping Explained.—Can you inform where I can obtain Mr. Quinby's work on Bees. A. Smith. *Ware*, *Mass* [We can send you the work, postpaid, for one dollar.]

Pumping Water Up-hill.—Noticing the following inquiry from one of your subscribers, viz: Can I bring water 6 or 8 rods by a suction pump? I would say from actual experience, *yes*. The distance from the well to the pump makes no difference with the operation of the pump. It will raise water just as high the above distance, as though the pump was directly over the well. I have used a pump that stood some distance from the well, with a gradual rise of about twenty feet from the well to the pump, and yet the pump worked as easy as though it stood over the well and drawed water the same height. The above was an old fashioned wood pump. The logs were put down like a common water works, only the logs were rimmed out with an inch and a half auger. They must be air-tight. The above is a simple statement of facts, with more experience than theory. If your subscriber wishes any more information I should be happy to give him all in my power. An Old Sub.

Grafting the Peach on the Walnut.—A gentleman of this place has suggested to me the idea of grafting the peach on the common black walnut. He says that they do succeed invariably in producing a heavy crop, on account of the lateness of the walnut in putting forth, and that they never winter-kill. I would be happy to hear from any person, through your valuable paper, their knowledge on the subject, and as to the best time and manner of grafting the same. P. Myers. *Des Moines*, *Iowa*. [The peach will not grow upon the the black walnut—there is no natural affinity between hem; they belong to totally distinct natural orders.]

Nutting's Fan-Mill.—In the Cultivator for May I see a more extended notice of "Nutting's Fanning and Assorting Machine," of which I had previously formed a very favorable impression, and now feel satisfied that it is just what I want. Where can I procure one and how—price, &c.? Will you please inform me in the July number of the Cultivator, and you will doubtless oblige many others, as well as myself. Daniel T. Brown. *Orange Co.*, *N. Y.* [Will the manfacturers please notice, and advertise accordingly?]

Plaster on Wet Land.—In reply to a question as to the effects of this application, addressed to French farmers, Boussingault received ten answers—all expressing the opinion that it was of no benefit.

Notes for the Month.

Great Trial of Plows.—There will be a thorough trial of plows, under the auspices of the Maine Agricultural Society, at Augusta, to commence on the 13th of September next. Competition is open to all the world, and medals will be awarded for the best plow for all-work; sod plow for stiff soils; sod plow for light soils; plow for fallows; reversible plow; combined sod and subsoil plow; subsoil plow; implement for deep and thorough pulverization of the soil, that shall successfully compete with the plow. Plows are required to carry a furrow not less than seven inches deep, and adaptability for all work, and for fallows, for stiff soils and light soils. Entries must be made with the Secretary, Dr. E. Holmes, Augusta, Me., before the 1st of August next. The awarding committee consists of S. L. Goodale, Saco; John P. Perley, Bridgton; J. D. Lang, Vassalboro; Sanford Howard, Boston, Mass.; John J. Thomas, Union Springs, N. Y.; James J. Mapes, Newark, N. J.

Peoples' College.—A quarterly meeting of the Trustees of this Institution was held at Havana, on the 11th ult. Among the business transacted was the adoption of resolutions, providing for the endowment of nineteen Professorships; among which are: Anatomy, Physiology and Veterinary; Natural History; Chemistry, Mineralogy and Botany; Agricultural Chemistry; Practical Agriculture; Horticulture; Natural Philosophy; On the Application of Sciences to the Arts. The course of study embraces three departments: Classical, Scientific, and Select; the course occupying four years, at which time the students receive a diploma. Students can take a partial course, if desired.

National Agricultural and Statistical Bureau.—A circular has been issued to the agriculturists throughout the Union, to make an organised and systematic effort to secure the establishment by Congress of a National Agricultural and Statistical Bureau. The author of this movement is Victor B. Bell, Esq., of Chicago, Ill. He says: "The proposed measure has repeatedly been brought before the notice of Congress. Its adoption was earnestly and specially recommended as of high national importance, by Presidents Washington, Taylor, and Fillmore. Resolutions of instructions in its favor have been passed at one time and another, by the legislatures of Vermont, New-York, Massachusetts, Pennsylvania, Tennesee and Alabama. The Hon. A. A. H. Stewart, while Secretary of the Interior, made an able report, urging its adoption as a measure of great public utility." Of the value to the country of such a Bureau, provided it could be conducted free from political influences, we have not a doubt, and hope it may be established.

Failure of Corn on Muck.—A correspondent of the *Ohio Cultivator* has tried corn on the "black land" in Clinton Co., where it is well drained and cultivated, and fails to grow crops. He says the corn looks fine and does well until about waist high—then the blades begin to show a marked, striped appearance. After that the stalk does not grow well; the few ears formed are worthless, and the yield on the deepest muck is not over ten bushels per acre. Probably the muck wants aerating or exposure to the air to a greater depth than it has yet received. We have seen corn tried on a mucky soil growing excellent grass, roots, oats, and barley, which failed as did that above stated, and after a few years other grains ceased to do as well as at first. We thought it due to the exhaustion of the surface soil and the acidity of subsoil, still quite wet below twelve or fourteen inches in depth. Who has raised good corn on a deep black muck?

Value of Pasturage.—"P. H." of Milan, O., to illustrate the value of grass to the farmer, gives in the *Rural New-Yorker*, the statement condensed below. A year ago he had a seven acre fresh clover pasture, above what he thought necessary for the stock he then owned. For this he purchased, at $8 each, some thrifty yearling cattle, partly Durham, which had been well wintered—turning them in as soon as they could get a full bite. Seven were placed in the lot referred to, for three and a half months, which gave them abundant feed, and more, which was consumed by horses. A competent judge then said they would sell quickly at $13 each, giving $5 per acre for the grass they had consumed—the price of stock having fallen rather than risen during the summer. Last winter he kept them on hay and cornstalks—sold one recently to a butcher for $23; another is a cow worth $25, and none are worth less than $20. We incline to his opinion, that the profit would have been much less, had they been badly wintered the past season.

Black Walnuts and Butternuts. — An Illinois farmer has grown these trees successfully, and gives some hints on planting in a religious journal. The first requires a deep alluvial soil, where it grows very rapidly. The nuts may be planted in the fall when first gathered, or thrown in some safe corner and lightly covered with leaves and dirt until spring. They should be planted where they are to stand, for owing to their long tap-root they are troublesome to transplant, besides not doing as well after the tap-root is cut off. The butternut may be grown in the same way; it has no tap-root, but lacks rootlets, and therefore had better be planted where it is to remain.

The Elder Bush a Protection from Insects.—We have seen it stated that an eminent English botanist made experiments in the year 1794, which led to the conviction that elder bushes would prove a protection from many of the insects which are so troublesome in gardens. If any one will notice, it will be found that worms, flies, bugs, or insects, never touch the elder. This simple fact led to experiments, and it was found that leaves of the elder scattered over cabbages, cucumbers, squashes, and other plants, subject to the ravages of insects, effectually shields them. And it is said that the plum and other fruit may be saved from the ravages of insects, by placing upon the branches and through the tree, branches of elder leaves. It is very little trouble to try the experiment, and we hope some of our readers will test this remedy and report upon it.

Large Yield of Ruta-Bagas—Transplanting.—Wm. J. Pettee, of Salisbury, Conn., writes to the *Am. Agriculturist* that he has repeatedly tried sowing ruta-baga turnips in a bed thinly, about the 10th of June, and when the plants are of proper size transplanting them to the open field. The plan saves the first weeding, and also the thinning. Mr. Pettee reports that he gathered 900 bushels from an acre so planted. The best quarter acre produced 325 bushels, or at the rate 1300 bushels to the full acre.

Bone-Dust.—A contemporary suggests that old bones should be placed in the heap of stable manure, and the heating, sweating process will soften them, so that they can easily be broken up, and all the animal matter and gases retained. By placing them in the fall where the manure heap is to be made, and keeping them covered by the accumulating heap during winter, they will add much to the value of the manure.

Water Troughs.—A large iron kettle, such as is used for boiling potash, furnishes a convenient and lasting watering trough for stock, and we find them cheaper in the end than any which can be made of wood, however strongly constructed.

Surface Manuring.—A Maine farmer, writing to the *Boston Cultivator* on the application of manure, says that trials of plowing it under and of putting it on the surface after plowing, have satisfied him that the latter is the way to use it most profitably. He has tried it on corn, potatoes, wheat, oats, and grass, and always with good results. He first composts it with muck or loam, until it is made fine, and then spreads it upon the furrow—harrowing it in before planting or sowing. He says plowing under manure produces good effects, but they are less satisfactory than surface application, especially of fine manure.

Artichokes.—A correspondent of the *Maine Farmer*, writes to that journal that Messrs. E. & D. P. Ramsdell of Canaan, Maine, planted a piece of ground in the spring of 1858, measuring two squares, with artichokes, and this spring they dug from the ground twelve bushels. This is at the rate of 960 bushels per acre, and we cannot see why it may not be a profitable crop to raise for hogs, milch cows, &c.

Sorrel Hay.—This grass, says the *N. E. Farmer*, should be cut before the seed is fully matured, and cured with as little exposure to the sun as possible. Mow in the morning, and cock in small bunches as soon as the dew is off. We thus obtain an article possessing considerable value, and which is eagerly devoured by sheep and horses, besides accomplishing much towards eradicating it from the soil.

Soaking Fence Posts.—A number of years ago, we published in The Cultivator a receipt for soaking fence posts in a solution of blue vitriol, which is worth republishing at this time, particularly as our attention has been recently called to it The receipt of Mr. George B. Green of Windsor, Vt., as formerly published was: "One pound of blue vitriol to forty pounds of water. If the timber is dry, soak it ten days; if green, six will be sufficient. This solution will do for all kinds of timber requiring exposure to the weather—spouts, shingles, bean-poles, stakes, &c." A member of the Farmer's Club in Hudson, recently informed us, that at a late meeting of that club the subject was brought up for conversation, and one of the members exhibited a post, which, previous to being placed in the ground, had been soaked in a solution of blue vitriol—one pound of vitriol being used to twenty quarts of water. The post was pine, and when taken up was as sound as when first put down, eight years since.

The Fluke or Prince Albert Potato.—The *Rural New-Yorker* pronounces these two varieties identical, and thinks the change of name was given for purposes of speculation. Perhaps this is so. The potatoes considerably resemble each other, but our experience in growing each sort has resulted so differently that we have thought them different kinds. The Fluke turned out very poorly for the two or three years under trial, while the Prince Alberts, grown last season, were a decided success. The vines of the first-named were dwarf and bush-like, those of the last of medium length, and the usual appearance. The product of the first was very small potatoes, though on equally good soil with the Alberts, which were mostly very large and handsome. We have seen Flukes of equally good appearance.

Depth of Under-drains.—On this subject, John Johnston, who has laid some 220,000 tile on his farm in Seneca Co., says in the *Boston Cultivator*, "If practicable, drains should go so deep that the water comes in at the sides, instead of rising from the bottom of the ditch, and this I have found the case at from two and a half to three feet deep on my farm, with very few exceptions. After going deep enough to protect the tile, (and two and a half feet is ample for that,) I can see no reason for going down eighteen inches into the hardpan or stiff clay, wherein there is no water; neither do I think any man can show a good reason for so doing. It is true, if I did not find a bottom impervious to water at two and a half feet, I would go deeper, and find it if at all possible."

Marking Sheep.—Dry Venetian Red is said to be the best paint which can be used for marking sheep. It combines with the oil of the wool, and cannot be easily removed.

How to Remove Films from the Eyes of Cattle.—I have had good success by using blue vitriol, finely pulverised. To apply it, fill a goose quill, and hold the eye open and blow it in W. *Allegany, N. Y.*

Exhibitions and Fairs.—We have received circulars and premium lists of the societies who are to hold their fairs as follows:

Maine St. Ag. Society, to be held at Augusta, September 13—16, 1859.
Salem Horticultural Association, Salem, O., September 14—16, 1859.
Fairfield Co. Ag. Society, Norwalk, Ct., Sept. 27—30, '59.
York Co. Ag. Soc., Fredericton, N. B., Oct. 11, 12, 1859.
Conn. River Valley Ag. Soc., Charlestown, N. H., Sept. 20—22, 1859.

Ohio State Fair.—The Tenth Annual Fair of the Ohio State Board of Agriculture, will be held at Zanesville, O., Sept. 20-23, 1859; the premium list and regulations of which have been received from John H. Kilpart. Among other noticeable premiums, the Society offer $40 for the best acre of Indian Corn, not to produce less than one hundred bushels.

Rock Island Agricultural Society.—A circular of the Premium List and Regulations of this Society has reached us, from D. F. Kinney, Secretary. The 7th Annual Fair is to be held at Rock Island, Illinois, Wednesday, Thursday and Friday, Sept. 21-23. 1859.

Laporte Co. Ag. Society.—A circular of this Society has been sent us by C. F. Webster, Sen. The Eighth Annual Fair will be held at Laporte, Laporte Co., Ind., October 4-7,1859.

Sale of Devons.—Geo. Vail, Esq., of Troy, has recently sold his imported Devonshire bull "May Boy," and two fine yearling Devonshire heifers, to I. V. Jones, Esq., of Burke Co., Georgia, and also a fine young Devonshire bull to C. N. Bement, Esq., of Poughkeepsie. The young animals are the get of "May Boy," and will do credit to any herd.

Mr. Thorne's Catalogue.—We have received the "Catalogue of Short-Horned stock belonging to Samuel Thorne, Thorndale, Washington Hollow, Dutchess Co., N. Y." It embraces fifty cows and heifers and fourteen bulls, which for purity and excellence of blood, are probably not excelled by any herd in Europe or America.

Stock Importation.—The York County Agricultural Society of New Brunswick, have lately imported from the herds of the Messrs. Geekie of Perthshire, Scotland, four improved Short-Horn bulls and two heifers, and three improved Leicester rams. The animals arrived at Fredericton in excellent condition, and will do much to improve the breed of cattle and sheep in New Brunswick.

Drainage in France.—Within a year or two past, large tracts of land have been thoroughly and systematically drained in the vicinity of Paris. The total amount of land drained in the Department of *Seine et-Oise*, is five thousand acres, owned by two hundred and twenty-four land-holders; costing an average of $27 per acre. By this means the product of the land has been increased nine dollars per acre. The estimated yield of wheat has been from nineteen to twenty-six bushels to the acre, and of oats from twenty-eight to forty bushels. A foreign writer says that before many years, draining and irrigation may be carried to such an extent as to free France, in a great degree, from the numerous inundations to which many portions of the country are now subject.

Root Crops in England.—The London *Farmers' Magazine*, states that 40 tons of swedes per acre, all cleaned and topped have been grown, each turnip being allowed a space of 28 by 10 inches, thus taking up 280 square inches of ground. If planted regularly, this would give 22,402 turnips, which at 4 lbs. each, would amount to 40 tons 8 lbs. per acre. It further states that a market gardener at Fulham, grew 64 tons of mangold wurtzels per acre, on a wager of twenty-five dollars, which the gardener won. They were planted each in a space measuring two feet by one foot; each root taking up 288 square inches. There would thus be 21,780 plants upon an acre; and each one must have averaged a little over 6 lbs. 9 oz. to produce the 64 tons. The land on which this enormous crop was grown, is yearly dressed with the strongest horse manure that can be obtained – that principally made from corn. This shows what high cultivation will do for the root crop.

GREEN CROPS FOR FODDER.—A matter of considerable importance which we would urge upon our readers at this moment, is that some crop be planted as a feed for cows during the summer. If this has not been done already, no time should be lost in doing it now. If a half acre cannot be sown, let it be less; but have the ground in good order, and plant corn or Chinese sugar-cane, in drills at about three feet apart, so as to be easily cultivated, and the weeds kept down. It should be planted at intervals of about ten days till the first of September; thus a fresh supply will be on hand as feed for milch cows. A dozen stalks cut and given to each cow night and morning, will give a wonderful increase of milk and good appearance, and the cows will very willingly come to the stable at night. We have tried this method, and recommend it to all farmers. In the Northern States, the seed of the Southern corn, which can be procured at all grocers, will be found better for this purpose than the Northern varieties. If the butts of the stalks are too hard for the cows to eat, they can be given to the hogs; thus nothing is lost.

AGRICULTURAL "SCIENCE."—"If there be any *truth* in the *fact* that the composition of a plant is a clew to its requirements *as food* in the soil, they [" figures of some of the most important elements of the Indian corn plant,"] will prove interesting and useful." Thus speaks the "Weekly Farmer" department of one of the Illustrated Journals of our Metropolis. The sentence is a model of murdered English and of nonsense. "Facts" are always "true," but such "facts" as the statement that "an analysis of the grain of White Flint corn will give of

" Phosphates, ... about 35 per cent.
" Potash, ... " 25 "

Will admit of considerable question. The statement that "the cob will give about 35 per cent.," is of the same character. If true, the supply of potash could be procured far more cheaply from the corn crop than any other source—over *twenty pounds* being contained in every bushel of corn in the ear, to say nothing of twelve pounds to the hundred in the leaves!

EFFECTS OF FROST ON WHEAT.—A correspondent of the COUNTRY GENTLEMAN writes as follows: "Doleful accounts of injury to the wheat crops west, from the late frosts, have reached us. It may not be generally known that fair crops of wheat are sometimes harvested when a June frost has killed the whole stratum of upper heads. Such a case occurred in northern Ohio about 1845. A friend showed me a field of about 20 acres soon after the frost, which had just headed out, standing some four feet high, and which he supposed had been entirely destroyed The reserve stalks afterwards came forward, and gave him a yield of about 20 bushels to the acre. But for the frost it should have yielded from thirty to thirty-five per acre. Let us hope our farmer friends who have been touched with the frost, will take courage, trust in God and good husbandry, and all will be well. J. W. S.

CULTURE OF POTATOES.—A writer in the *Prairie Farmer*, thinks potatoes are seriously injured by working when wet with dew or rain, and relates the following experiment tried last year. A part of his potato field, the whole of which was treated alike, and a good soil, he plowed and hoed once only, in the middle of the day when the ground was perfectly dry, leaving them untouched until dug in October. The vines kept green throughout the season, and the crop of potatoes was very large. The other portion of the field was worked three times when the ground was wet with dew. These blighted early, gave but half a crop, and that of inferior quality. The seed and time of planting were the same.

CHANGING SEED.—A writer in the *N. E. Farmer*, says the yield of his potato crop is increased from fifty to one hundred per cent., by procuring seed potatoes which grew on an entirely different soil, fifteen or twenty miles apart. And this plan of changing seed is a good one, and should be remembered by all practical cultivators. Corn, pumpkins, beans, and garden seeds, do better by frequently changing the seed; and even if the change is only made in one's own vicinity, and among neighbors of a few miles distant, it will be a great benefit to the crop.

State Fairs for 1859.

We publish this week a list of the time and places where State Fairs are to be held, so far as we are able to give them. Will our readers, in States not reported, inform us, that our list may be complete.

Canada West, ...	Kingston, ...	September 27—30.
California, ...	(holds 10 days.)	September 27—
Georgia, ...	Atlanta, ...	October 24—28.
Illinois, ...	Freeport, ...	September 5—9.
Indiana, ...	New-Albany, ..	September 26—30.
Iowa, ...	Oskaloosa, ...	September 27—30.
Kentucky, ...	Lexington, ...	September 13—17.
Maine, ...	Augusta, ...	September 13—17.
Michigan, ...	Detroit, ...	October 4—7.
New-Jersey, ...	Elizabeth, ...	September 13—16.
New-York, ...	Albany, ...	October 4—7.
Ohio, ...	Zanesville, ...	September 20—23.
Vermont, ...	Burlington, ...	September 13—16.

Cheese Dairies and Dairy Cows.

ROME, N. Y., June 9, 1859.

EDITORS CO. GENT.—A kind friend, whose broad acres spread out around this beautiful village, invited me to a short ride, that we might see some of the finest lands in the county.

Our route lay along the banks of the Mohawk, which here tends to the north, and also along the banks of the Black River canal. A portion of the way the bottoms are narrow, but at other points they spread out much wider, furnishing some beautiful farms.

The business of the farmers in all this region, seems to be the dairy, and if they do not make money as rapidly as their grain growing brothers, they keep it better, as the general thrifty appearance of the country indicates. We passed one farm establishment that might be called a Cheese Factory, and furnishes a hint that may be useful in other places. The small dairies in this vicinity bring their milk to this farm, where it is all manufactured into cheese at a certain rate per pound, and when sold the proceeds are divided pro rata, according to the milk brought. As the most profitable cheese in this section, should weigh from 80 to 100 pounds, it enables the small dairymen to dispose of their milk to the best advantage. That it works well is shown by the fact that the business has been carried on now for some five years.

Our drive terminated at the residence of Mr. HENRY WAGER, who has long been identified with agricultural progress, and one of the active members of the State Society. He is a practical farmer, working some five or six hundred acres of land. As the region is not favorable to grain, his operations are mainly confined to stock and the dairy. Some idea may be formed of his operations, by knowing that his herd of milch cows numbers about one hundred and twenty, divided into two dairies. I regretted that I did not have time to visit the dairy houses and see the whole process of cheese making, from the milking to the press.

Some of the finest cows for milk that I have ever seen, were in his herd, and the systematic manner in which he prosecutes his breeding, must ultimately give him one of the finest herds of cows in the state. He has taken pains to get Short-Horns of good milking qualities, and is breeding grades in that direction. Thus far his success has equalled his most sanguine expectations, some of his heifers of the first cross being very superior dairy animals. I think he is in a very fair way of developing and perpetuating a superior race of dairy animals, and that persons who wish to improve their dairy stock would do well to get him to save some of his bull calves from the best of his grade milkers. He uses thorough-bred bulls in his herd.

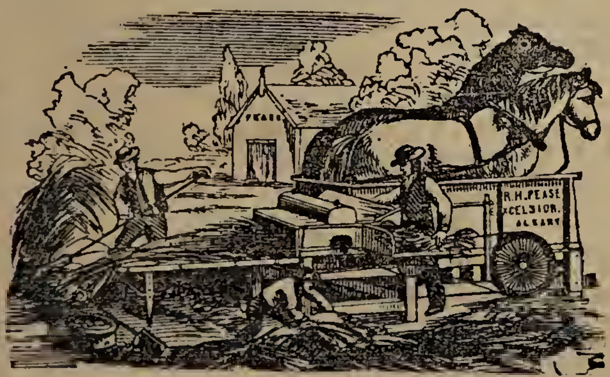
To the farmers who think they have no time to arrange and beautify their premises, Mr. Wager's home is a study, for as yet I have not seen, in all the state, a simple farming establishment, more beautiful and complete in all its surroundings. Those farmers whose means will enable them to adorn and beautify their homesteads, could have no better model. P.

Hints on Turnips.

The ground upon which you have had a crop of early potatoes, or some other vegetables, may be used for another purpose after the crop has been taken off, thus obtaining a double profit from your ground. Those who live near a market, or in the vicinity of large cities, doubtless manage their land in this way, but farmers are not apt to thus economize their ground. Indeed we have seen farmers who would neglect to plant a piece of ground with purple-top turnips, which had been cleared of its former crop by the middle of August. And speaking of turnips, reminds us to say a word in regard to the English or common flat turnip. If you have a piece of ground from which has been taken a crop of early potatoes, it can be planted with English flat turnips, and the yield will be good, as they require to be sown about the middle of July or first of August, and grow rapidly during the cool weather—and they will gain until late in the fall. Where pastures are not too remote from farm-buildings, it is a good plan to plow a piece of ground and fence it off for a yard, where the cattle can be yarded until the first of August; then harrow and sow the seeds of the English turnip broadcast. Sward land is the best for this crop, as we have proved by repeated trials. In fact, the English turnip is an important crop, and this single item makes it so: it can be sown late, and put in those waste and spare places in the fields and garden where other crops are missing. There may be many hills of corn in your field which the crows or worms have taken, or which has not come; these can be noticed as you are hoeing the last time, and then several turnip seeds can be scattered in the place. These will produce a good yield, and it will be far better than to have the ground occupied by worthless weeds; or if you choose, ruta bagas can be transplanted in these waste spots. Transplanting should be done during or immediately after a rain. Have a small stick made smooth and sharp; with this you can make a hole in the ground, and the plant can be placed in the cavity in its natural position; the dirt should then be jammed around it closely, and it will hardly know that it has been moved from its original place.

◆

Twenty Acres of Strawberries.—The farm of Mr. R. Sells, about five miles from Cleveland, O., is devoted entirely to growing the smaller fruits and berries. There are twenty acres in strawberries, of all the various kinds, and their comparative merits are distinctly shown under the methods of cultivation adopted. Of the new sorts, Wilson's Albany promises best.



EXCELSIOR AGRICULTURAL WORKS,
TIVOLI HOLLOW, ALBANY, N. Y.,
RICHARD H. PEASE, Proprietor.

I would call the attention of your readers to the following articles of my manufacture, being satisfied that they are, each and all of them, the very best and cheapest labor-saving machines ever offered to the public. I use none but the best material, and employ as experienced workmen as can be had; hence my work is unsurpassed, both in utility and durability. All I ask is, that you should make a trial of any of my machines, and I am confident of giving satisfaction. The Excelsior

CHANGEABLE RAILWAY HORSE POWERS,

Have long been acknowledged to be the best, most durable, and easiest working machines in use. They have invariably taken the First Premium at every test trial where they have been exhibited, both at the United States and State and County Fairs. Price $116.

CADY'S IMPROVED LEVER HORSE POWER,

To be driven by 2 or 4 horses, is a first-rate machine for heavy work, as it combines durability and cheapness, and has a variety of motions with same speed of horses. Price $60.

Excelsior Changeable Thresher and Separator,

For threshing and separating any kind of grain, has stood many severe tests with uniform success, and can be run by wind, steam, or horse power. With my One-Horse Power, it is capable of threshing from 100 to 175 bushels of wheat, rye, barley, or buckwheat, or from 175 to 200 bushels of oats, in one day; and with the Two-Horse Power and one extra hand, nearly double the work can be performed. Price, Single, $37; Double $40.

THRESHER AND CLEANER COMBINED,

To be run by the Two-Horse Power, are warranted to clean the grain thoroughly. They are quite compact, occupying but little more room than the Thresher, and are highly recommended by those using them. Price $125.

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(Cady's Patent,) can be attached to any horse, water, or steam power, with a belt, and is capable of performing more work than any machine of the kind in use. Over 100 of these machines were sold in one State last year, and all worked to a charm. Price $65.

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For sawing cord-wood, stove-wood, &c., has been in extensive use on the railroads in the country, and also by many farmers, and is just the thing for the purpose. With a One-Horse Power, it can saw from 20 to 25 cords of wood in one day, and with a Two-Horse Power and an extra man, much more. Price $37.

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To be run by the Excelsior Horse Power. Is capable of sawing a log 4 feet in diameter. Its cheapness and facility of using, recommend it to general use. Price $25.

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This little machine is capable of hulling from 5 to 10 bushels of seed in a day, without injuring or wasting it in the least. Price $32.

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For churning, turning grindstone, &c., is got up in a most substantial manner, all the shafting and rollers being of iron. Is easily attached to any churn, and is a great saver of time. Price $18.

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For covering, cultivating, and hoeing potatoes and corn. They do away entirely with the hoe, and by tilling and cultivating all parts equally, they insure a much larger crop.

Orders respectfully solicited and promptly attended to, for any of the above-mentioned machines, which are all warranted to give satisfaction, or they can be returned at my expense.

All descriptions of Agricultural Machinery built to order, in the best manner, at short notice.

Catalogues sent free, by addressing
RICH'D H. PEASE,
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FIRST QUALITY PERUVIAN GUANO, Mapes' Phosphate, Poudrette, Bone Dust, Castor Pomace, &c., for sale at Agricultural Depot, 100 Murray-st., New-York. HENRY F. DIBBLEE.

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HORSE HOES of the Knox's and Expanding patterns, both of which combine hoeing and weeding, and are exceedingly useful and economical. For sale at Agricultural Depot, 100 Murray-st., New-York.
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FISH GUANO from the Southold Works, in quantities to suit purchasers, put up in barrels, at $37.50 per ton of 2000 lbs. A. LONGETT,
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BUCK-EYE MOWER!

A. F. MAYHER & CO.,

No. 54 Vesey-Street, New-York,

Now offer to the Farmers,

THE BUCK-EYE MOWING MACHINE,

Which is too well known to need any description from us. The Machine is WARRANTED to work well, or no sale.

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Mowing, or Mowing and Reaping Machines, Harvesting Tools, Agricultural Implements, Seeds or Fertilizers,

Will find it to their advantage to call at the

New Agricultural Warehouse, Machinery Depot and Seed Store, No. 54 Vesey-st., New-York,

Between Broadway and Greenwich-sts., near the Washington Market and Astor House, north side of the city of New-York. A. F. MAYHER & CO., Proprietors,
No. 54 Vesey-st., New-York.
☞ *Send for Circular. Remember No. 54 Vesey-st.*
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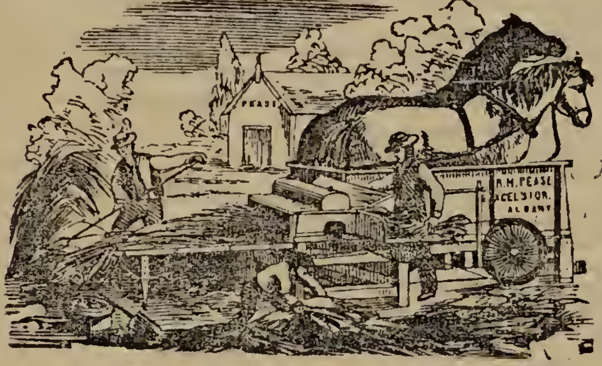

"The Best in the World."

OUR EXCELSIOR HORSE POWERS, THRESHERS, and THRESHERS & CLEANERS Combined, CIDER AND SAW MILLS, &c., are acknowledged second to no others, and have been awarded the highest testimonials where they have been exhibited. We have manufactured them for the last 6 years, and they are warranted to perform satisfactorily in every respect.

PRICES FOR 1859-60.

Two-Horse Power and Thresher, complete,	$160.00
One-Horse Power and Thresher, complete,	128.00
Two Horse Power and Thresher, Cleaner combi'd,	245.00
Cider Mill, (Krauser's Patent,)	40.00
Saw Mill,	37.00
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For further information, address
PEASE & EGGLESTON,
Albany, N. Y.,
Manufactrers and Dealers in all kinds of Implements and Machines.
June2 –w8tm3t

COMMERCIAL AGENTS WANTED. Able and honest men from New-England or New York. A. W. HARRISON, Philadelphia, Pa. feb.10–6.

VIRGINIA FARM LANDS.—There are desirable FARMS for sale, at $10 to $20 per acre, within a few hours ride from Washington City. Wood is plenty, and pure soft water is abundant. Climate healthy and society good. For particulars, address
L. H. REYNOLDS,
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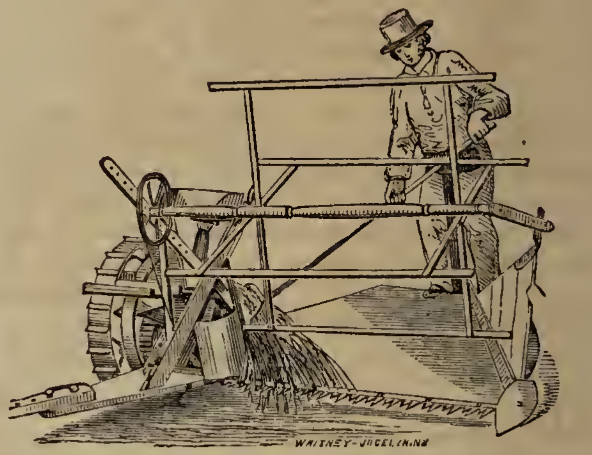
FOR SALE CHEAP.—DURHAM BULL LOCO FOCO, (1778)—calved March 1853—color red with some white. He is in prime condition, and every way a desirable animal. Price $150—cash.
R. HALE,
Ap14—w3tm3t Aurora, Cayuga Co., N. Y.

MANNY'S COMBINED REAPER AND MOWER,

WITH WOOD'S IMPROVEMENT,

For the Harvest of 1859.



The subscriber begs to inform the public that he continues to manufacture this popular machine, and pledges himself to produce an implement that will fully sustain its former reputation, as the best combined machine yet introduced, and inferior to none, either as a Reaper or Mower.

It has had a steady and increasing popularity from the first achieving a complete success in the first important trial at Geneva in 1852. It carried off the highest honors at the great National Field Trial at Syracuse in 1857; and amidst all the competition and trials of 1858, came out with more and better established points of excellence than ever before.

The general principles peculiar to this machine, and upon which it is constructed, have proved so successful that there has been no attempt to change them.

The main effort during the last year has been to improve its mechanical construction, to make it stronger and more durable, and sustain its reputation as the leading and most acceptable machine to the largest class of farmers in the country.

Warranted capable of cutting from 10 to 15 acres of grass or grain per day, in a workmanlike manner.

Price of Machine as heretofore, varies according to width of cut, and its adaptation in size and strength to different sections of the country, from $125 to $150, delivered here on the cars. WALTER A. WOOD,
Manufacturer & Proprietor,
Mar24—w&mtf Hoosick Falls, N. Y.

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Freight carried at reduced rates and forwarded promptly. ELI HUNT, Agent—Office on the Wharf, New-York.
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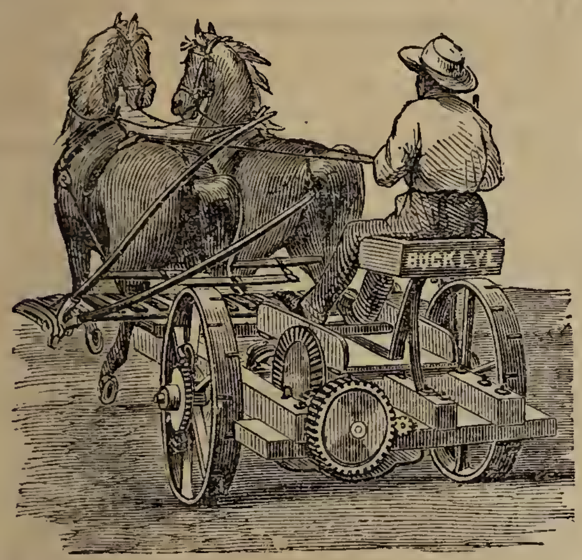
HAY AND GRAIN PROTECTORS.

The subscribers have for four years, by extensive correspondence, by practical observation, and by many experiments, endeavored to obtain information that would be a guide to the manufacture of the best *Hay and Grain Covers*, and we now offer the results of these investigations to the public. *We know* that our Protectors are the best ever offered to the community. As to the utility of the covers, we have the testimony of intelligent farmers in every part of our country.

Orders for samples or covers should be forwarded at once. CHASES & FAY,
May5—weow2tw8tm3t 233 State street, Boston, Mass.



BUCKEYE MOWER,
WITH FOLDING BAR.
Aultman & Miller's Patent.

The subscriber takes pleasure in calling the attention of Farmers to the "BUCKEYE," the most complete and successful Mower ever introduced; combining in the simplest form all the qualities necessary to a perfect Mower. Its frame is supported on *two driving wheels*, either of which is independent of the other. The CUTTER BAR is attached to the frame by a DOUBLE HINGE JOINT, which allows either end, or the whole, to rise or fall, to conform to inequalities of the land. By means of a *lever*, the Cutters can be raised to pass obstructions or over cut grass—in mowing can turn either to right or left—always throws itself out of gear in backing, and backs with the ease of a cart; is light draft, free from side draft; has no weight on the horse's neck; is safe for the driver; almost noiseless in its operation; works well on any land—side-hills or salt meadows; and in any grass, whether lodged or standing, at a slow walk of either horses or oxen.

When not in use, the Cutters can be instantly folded over the front of the frame, and the Mower then driven any distance on the road. This feature belongs exclusively to the Buckeye Mower.

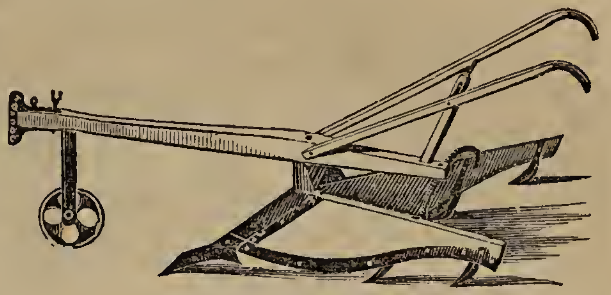
Since its first public exhibition, at the Great National Trial of Harvesting Machines at Syracuse, N. Y., July, 1857, at which it received the HIGHEST AWARD, THE FIRST PREMIUM GRAND GOLD MEDAL AND DIPLOMA, AS THE BEST MOWER, IN COMPETITION WITH *Manny's*, *Ketchum's*, *Hallenbeck's*, *Allen's*, *Burrall's*, *Kirby's*, *Heath's*, and several others, its principles have been fully tested by more than One Thousand Farmers, and without an exception, has received their unanimous approval. During the past season, numerous *First Premiums* were awarded to the "BUCKEYE," including the *New-York and Connecticut State Agricultural Societies.*

THE BUCKEYE HAS NO EQUAL—IT IS THE BEST MOWING MACHINE IN USE.

It is warranted to cut and spread from 10 to 15 acres of grass per day, with a span of horses and a driver, as well as is done by the best mowers with a scythe.

The demand the past season was far beyond our ability to supply, and we trust orders will be forwarded early, to prevent disappointment. ☞ Circulars, with a full description, forwarded on application.

JOHN P. ADRIANCE,
Manufacturer and Proprietor,
No. 165 Greenwich-st., New-York.
EMERY BROS., Agents, Nos. 62 & 64 State-st., Albany, N. Y. May1—w&mtf



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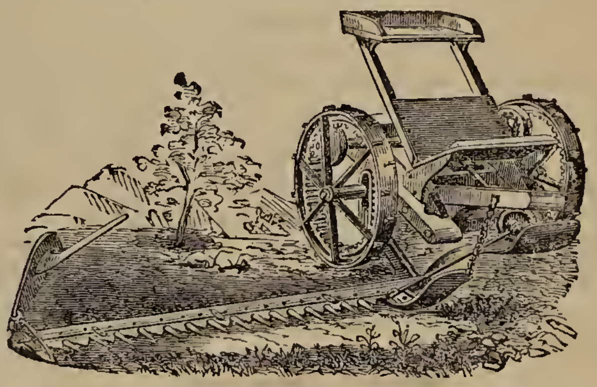
TRY ONE OF SHARES' PATENT
Cultivating, Hoeing and Hilling Machines,

PRICE $10, which will save more than twice its cost the first season, and with ordinary care will last years. It is light and easily used with one horse, and will do more cultivating in going between the rows once, than an ordinary cultivator can do in two or even three times, and will hoe and hill any crops planted in hills (the crooked form of the back part of the wings shape the hills,) or drills fast as a horse can walk, and better than men can do it with hand hoes. Price only $10, and warranted—weight 80 pounds.

Manufactured by PEASE & EGGLESTON,
84 State-st., Albany, N. Y.,
Dealers in all kinds of Agric'al Implements, Seeds, &c.
May12—w8tm2t

WOOD'S MOWER.—
Patented February 22d, 1859.



During the six years I have been engaged in the manufacture of the Manny Combined Reaper and Mower, I have given much thought and attention to the construction of what I foresaw would be a great want of the Farmers—a lighter and cheaper machine expressly for mowing, than had yet been made.

And now, after the most thorough and repeated experiments and tests in every variety of field, and in all kinds and in every condition of grass, I am prepared with entire confidence to offer to the farmers and dealers of the United States, the great *desideratum* in this department of Agricultural labor-saving machines—a Mower, superior in its capacity for good work to any hitherto introduced, of easy draft, light, cheap, and durable.

This machine I now offer as my latest invention, to meet a special want of farmers, and to place within the reach of all, a Mower that for practical working, cheapness and simplicity, will be without a rival.

I build Two-Horse and One-Horse Mowers. The Two-Horse Mower weighs 425 lbs., and cuts a swath four feet wide (or more if specially ordered) The One-Horse Mower weighs 30 lbs. less, (395 lbs.,) and cuts a swath three and a-half feet wide.

For a more full description of the Mower, reference is made to my Pamphlets, which will be furnished on application. With each machine will be furnished two extra guards, two extra sections, one wrench and oil-can.

Warranted capable of cutting ten acres of grass per day in a workmanlike manner.

Price of Two-Horse Mower,	$80
" One-Horse Mower,	70

Delivered here on the cars.

I continue as heretofore, and with greater success than at any previous time, the manufacture and sale of "Manny's Patent Combined Reaper and Mower with Wood's Improvement." WALTER A. WOOD,
Manufacturer & Proprietor,
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Farmers should keep their accounts carefully, and know whether each year's operations will make them richer or poorer!

FARM BOOK-KEEPING.—By W. D. Cochran of Detroit. Sets—comprising *Full Instruction* in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully.—also *Day Book* and *Ledger*—for sale at this office—price by mail, post-paid, $2.30. L. TUCKER & SON

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THRESHING MACHINES,

EXCELSIOR FANNING MILLS,

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PEEKSKILL PLOWS in good variety, for sale at Agricultural Depot, 100 Murray-st. New-York.

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For sale at $30 per ton of 2000 lbs. A liberal discount will be made by the cargo.

Circulars, with directions for use, may be had on application at our office. FOSTER & STEPHENSON,

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Albany, Dec 2—w&mtf.

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THIRD *To Improve the Soil and the Mind.* SERIES

VOL. VII. ALBANY, AUGUST, 1859. No. VIII.

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THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS —144 pp. 12 mo. — price 25 cents — $2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price $1.00—sent by mail post-paid.

Manuring the Wheat Crop.

In the palmy days of wheat-growing in Western and Central New-York, the application of active manures directly to this crop was not generally practiced. The opinion widely prevailed that such a course was injurious, by stimulating a heavy growth of straw at the expense of the grain, and in the rankness and succulency of the former, increasing the liability to lodge, and tending also to produce rust and mildew in the standing grain. In some instances, no doubt, high manuring has been followed by such results, but in many more, large crops of wheat have rewarded the application. We took occasion some eight years ago, to urge the subject upon the attention of our brother farmers, and the current of events influencing the wheat crop during that time, has brought it far more forcibly upon their attention.

We throw away our seed and labor, now-a-days, in sowing any but *rich*, warm, quick soils to wheat. We must get a large growth of healthy, early maturing plants, or the wheat midge will destroy the whole product. This we have urged in a former article, and will revert more strictly to the subject indicated in our heading.

Of all grains, says chemical analysis, wheat has in it more nitrogenous substances than any other. Fifteen per cent. of the organic matter of the grain of wheat belongs to this class. Although the straw may grow luxuriantly, the *grain* cannot be formed without it. "Up to the formation of the kernels," says a writer on this subject, "ordinary soils, with rain, dew, and air, can furnish and grow the wheat plant. But when it comes to the fruiting part, the plant has to seek in the soil for materials out of which to fabricate its seed. It is necessary, therefore, that there be in such soil what we farmers call nutritive or putrescent manure—something out of which *nitrogen* can be formed." This is furnished in barn-yard manure, and other fertilizers of like character. These in a partially decomposed state, (and hence furnishing almost immediately nutriment for the crop,) we would apply to favorable soils before sowing them with wheat.

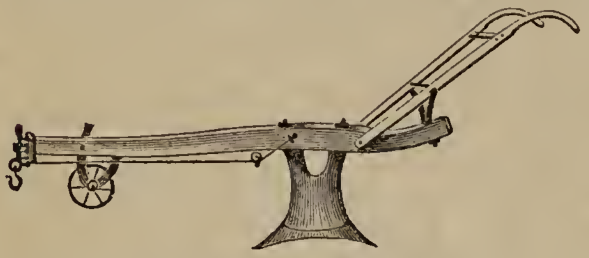
Many farmers have been in the habit of applying their stock of yard manure in a green or long state in the spring, to land intended for corn; reserving little or none for composting, or for application to the wheat crop. But this practice is becoming less general, and we now find frequently those who prefer keeping the manure in the yard until well decomposed, and then placing it in heaps for use the next season; applying it also upon winter grain, if they sow it, and as a top-dressing for grass land. This course is usually very successful. Though land heavily manured for corn, will produce good crops of wheat or barley following, it is seldom that the area which may be so manured and devoted to corn, embraces half the extent we desire for growing grain, or which would produce it if enriched sufficiently. Hence we see that we need more manure, as well as to study the most effective application of the same.

More manure may be had by composting that obtained from our farm stock with vegetable mould—the muck of swamps and marshes—the turf and wash of roads—the scrapings of ponds and ditches. We have doubled the amount and value of our yard manure by mixing it with muck from the swamp, and fermenting the same together in heaps loosely laid up and properly moistened. This was used at the rate of twelve loads per acre on land sown to wheat last autumn, being merely gang-plowed in before sowing. A small plot not dressed, shows a very marked difference — the growth is less than half of that on the manured portion, and the product will be of little if any value.

We hope the lesson of the past few years will not be lost on those who begin, after all, to think the wheat midge less the enemy of the farmer than his own improvident course in cropping with this grain. If it shall induce us to a better enriching and cultivation of the soil, and a more careful study of the nature and demands of our different crops, it will prove to the country at large a blessing and not a curse. If it leads the mass of farmers, as it has many of them, to employ every available means of increasing the quantity and quality of the manure made upon their farms, and to study attentively the most effective application of the same for growing the most profitable crops, it will do more for the advancement of agriculture, than almost any other means which are likely to be employed. We would urge, therefore, immediate attention to the preparation of manure for applying to the wheat crop, and from our own experience and observation, think that composted manure, mixed with the surface soil by harrowing or very shallow plowing, will prove of the greatest benefit to the crop. This method is practiced by the most successful wheat-growers of the present day.

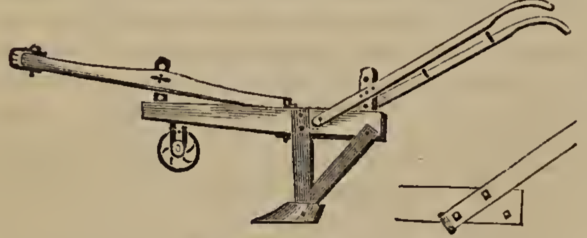
Subsoiling and Ditching Plows.

A correspondent inquires for the best subsoil plow. We have recently made trial of one manufactured by Holmes, Stringer & Co., of Munnsville, Madison Co., N. Y., which has answered an excellent purpose. The principle is not entirely new, but the quality of the materials and the finish, render it one of the best of the kind we have met with. The above figure is a fair representation of its appearance. The cast iron blade, when it becomes worn, may be reversed and used as much longer. We have used this plow with two horses, following in a furrow made nine inches deep by a three-horse team. The subsoil plow loosened up the bottom of this furrow from seven to eight inches deeper, making the whole loosened depth from the top of the sod or land-side, about sixteen inches, and over twenty inches if measured from the top of the inverted sod. The soil was a strong loam, nearly free from stone; in harder and more strong land the depth would be less.



Holmes and Stringer's Subsoil Plow.

Where the soil is quite stony, we have not found this subsoil plow to succeed so well as the *ditching plow*, used as a subsoiler, which passes under and loosens up stones with much efficiency. The annexed figure shows one of the best forms of this plow. Although light, it is so strongly braced as to secure it against breakage unless by the most careless usage. The depth may be regulated by raising the movable beam up the stiff, upright cast iron stem, a slot being made in the beam to meet the change of place by the circular movement. A similar provision is made for raising or depressing the handles, except that three holes are made for the bolt at different heights, and the stem is of wood. Where the depth to be run does not exceed three feet, the handles may be varied without the stem, as shown in the small portion of the beam on the right of the figure.



Subsoiler and Ditcher.

If this plow were intended for subsoiling only, there need be but one continuous and fixed beam, and the handles need not vary in height.

When used for ditching, it loosens up the subsoil and obviates the use of the pick. In many places the subsoil is so hard that two-thirds or three-fourths of the whole labor is required to loosen it if done by hand. Hence the great saving by the use of horse labor. This plow is drawn by two horses attached to the ends of a main whipple-tree about seven feet long, so that one may walk on each side. From one to three times passing will loosen up five or six inches of earth, which is then thrown out by hand with narrow shovels constructed for this purpose. The same process is then repeated. The earth being thrown out on both sides alike, is easily returned to the ditch after the tile is laid, by means of a common plow, the horses being attached to the long whipple-tree as before. One pair of horses will thus fill in about one mile in a day. Where the ground is stony, one man man should be employed with a crowbar or pick in removing them.

Where the subsoil possesses great hardness, the work should be done early in summer, while yet softened with moisture. Drains which have cost thirty to thirty-five cents per rod when dug wholly by hand, have been completed with the assistance of this implement, ready for the tile, at a cost of ten to twelve cents.

Discharge of Drains.

In reply to H. K. H., Columbus, Geo. The proper discharge of drains is a very important subject, and should be well understood. The man who drains ten acres of land with tile, does not wish to lose all his labor for want of a discharge for the water. Our correspondent wishes us to tell him how to drain a 40 acre meadow, which has no place where three feet ditches can discharge. But this is an impossibility, because water will not run up hill. It would be as unwise to commence draining a piece of land with no place for the water to flow off, as it would be to undertake to build a house without a foot of ground on which to place it. The first of all, therefore, is to secure a discharge. If other owners occupy the ground below, an arrangement must be made with them; or if a deep ditch must be cut a long distance to receive the discharge of all the others, the labor must be performed as a matter of necessity. A well, cut in compact subsoil, and filled with stones will not answer. A dozen tiles or more running full of water, as they would in a wet time from 40 acres of meadow, would fill such a well in a few minutes, and then the benefit of the draining would be at an end. If a main drain, four feet deep, could be made to discharge by carrying a mile or two, it might be made with a large channel, say with five or six inch tile, and would receive and convey away the contents of many smaller ditches. An *open* drain, four feet deep, would require to be at least 12 feet wide to prevent the banks from sliding in.

Our correspondent inquires if "level clayey lands, that absorb and hold water, can be drained into such a well, where there is no place for the outflowing of the surplus water; or is it to be understood that the tube of tiles, or the hollow therein, is to receive the water from the soil above, and in the course of time the same to sink into the earth at the lowest end of the tiles without any *positive outlet*." He will perceive by reflection, that if the water, already at those lower places, does not soon sink into the soil and settle away, that this result cannot take place when a hundred times as great a flooding is poured upon it from a long line of tile. When a forty acre lot is saturated with water, amounting in the aggregate to at least fifty thousand surplus hogsheads, it must all pass off slowly by evaporation, and by creeping drop by drop from particle to particle of soil, till all has found its way to the lower side and escaped. The object of tiles is to provide straight, smooth channels, through which two inch currents may sweep freely and rapidly, and be only a few minutes in passing the breadth of the field, instead of as many weeks without this provision. But these channels, to be of use, must have a free discharge. We cannot give any general rule applicable to the ten thousand different circumstances which exist throughout the country; but each land-owner must examine for himself, and provide such discharge as facilities afford and circumstances require.

Answers to Inquiries.

Insects.—Enclosed I send you a pair of the curculios that destroy the apple. I have a young orchard just coming into bearing; the apples have every one been punctured by this insect, so that they wither and fall by the first of July. There is not at this time one to be found that is not bitten by it. These I conclude are male and female, from the different color and appearance of the head. They were just caught by the fingers on the apple, with proboscis well in. Will you have some one that understands the insect tribe name it,—its habits, way of propagation, and the best way to destroy it? H. W. Lester. *Rutland*, *Vt*, *June* 20.

The curculio is a small dull dark colored insect with a conspicuously long beak, formed in part of its elongated thorax, and the whole not larger than a grain of wheat. The insects sent by our correspondent, were more than twice as large; and although, as usually happens in such cases, when merely folded in paper and not enclosed in a box, much crushed and broken, they evidently belonged to quite distinct genera, not only from the curculio, but from each other. One was a snapping beetle or *Elater*, as was evident from its peculiar form and from the short snapping-peg between its fore-legs; and the other appeared to be one of the *Lampyras* or fire-fly family, although not a fire-fly. The elaters ars commonly somewhat voracious insects, and sometimes attack fruit; we do not know that the Lampyras is as much so. We are inclined to think that the injury to the young apples may have been caused by some other insect, but we cannot judge with any degree of satisfaction without seeing the operation and the injured specimens.

Insects, to be sent by mail, should always be enclosed in a box, otherwise they will be almost certain to be crushed.

Apples.—Can you tell me the best apples for cultivation in this locality? H. *Richmond*, *Maine.*

Red Astrachan, Sweet Bough, Sops of Wine, Duchess of Oldenburgh, Porter, Gravenstein, Golden Sweet, Fameuse, Hubbardston Nonesuch, Baldwin, Rhode Island Greening, Roxbury Russet, Ribston Pippin, Northern Sweet, Danvers Sweet, and Mother. Perhaps a few others might be added of fruits of more local character.

Lawns—Blackberries.—If I top-dress my lawn in the fall with barn-yard manure, red clover will come in next spring. Will it not root out the finer grasses, or will frequent mowing root it out? When and how must I trim my blackberries? Please answer through Co. Gent., and oblige one if not many subscribers. B Franklin. *Godwinville*, *N. J.*

Red clover is poor for a lawn and white clover one of the best. The former will not grow without seeds, and if none are in the compost, our correspondent need not fear it. After the seed of the red clover are sown and the plants grow, they usually continue but two or three years, other grasses replacing them. Brief directions for pruning the blackberry will be found on p. 398 of the Country Gentleman, vol. xiii.

Blight on the Pear Tree.

At the late meeting of the Fruit Grower's Society of Western New-York, Dr. Spence of Yates Co., exhibited several specimens of dead trees, about three inches in diameter, where the bark near the ground, and of the roots more especially, was first affected, and then the rest of the tree followed, and certain death was always the result. W. Townsend and others had met with the same disease. No one could assign a reason why the blight should first attack the root, or any other part. The soil was fertile, with a gravelly subsoil, and was so well drained naturally, that a mill-stream would disappear upon it within a space of four rods. Another member had met with similar losses, with trees standing over a drain, the soil being clayey. The President, B. Hodge of Buffalo, had lost trees by the same disease, but they had stood on rather heavy wet land, and he ascribed the disaster to the surplus water. T. G. Yeomans of Wayne county, had found the same result with his standard trees, (which had not succeeded so well as dwarfs,) and he was of opinion that much land regarded commonly by the owners as dry enough, had still a superabundant supply of water. S. H. Ainsworth observed that the roots in these dead specimens had no descending or tap roots, and that he had lost trees by the same disease, in those localities or soils that favored the horizontal course of the roots; but where the roots extended downwards, he had lost none. He, as well as T. G. Yeomans and others, thought that as the surface water could not escape while the ground below was frozen early in spring, that freezing and thawing at this period while flooded with water had produced the fatal result.

Sheep Shearing Festival.

A public sheep-shearing took place at the residence of Gen. J. S. Goe, near Brownsville, Pa., May 26, at which James Higenbothem was chosen President, and William Duncan Secretary. Resolves were passed expressive of the industry and energy of Gen. Goe in breeding stock, and of the excellency of his flock. We give a summary of the number sheared, as furnished by the committee under whose superintendence the shearing took place:

2 French Merino Ewes, washed, average of fleeces 8 pounds 4 ounces.
8 French Merino Ewes, unwashed, average of fleeces, 10 lbs. 2 oz.
1 French Merino Buck, unwashed, weight of fleece 22 lbs. 2 oz.
1 Silesian Merino Buck, unwashed, weight of fleece 16 lbs. 6 oz.
3 Silesian Merino Ewes, unwashed, average of fleeces, 7 lbs.
4 Silesian Merino Ewes, washed, average of fleeces 3 lbs. 7 oz.
4 Spanish Merino Bucks, unwashed, average of fleeces, 12 lbs. 2 oz.
8 Spanish Merino Ewes, unwashed, average of fleeces, 8 lbs. 7 oz.
50 Spanish Merino Ewes, washed, average of fleeces, 5 lbs.

Wheat—Time of Harvesting.

The increased attention given to the culture of wheat, warrants us in recalling farmers to the subject of the best time of harvesting the same, taking into consideration the maturity of the crop, and the uses to which it is applied; and giving the results of a variety of experiments showing the influence of early cutting on the quantity and quality of the grain. The question is not a new one, nor shall we attempt to present new information upon it.

Many experiments in cutting wheat at different periods of ripening, go to show that from twelve to fourteen days before "dead ripe," gives the plumpest, heaviest, thinnest skinned, and most nutritive grain. The loss in weight by standing is nearly 15 per cent, and the loss in equal weights by the increase of bran, is about 4 per cent. At this period the grain is in the milk; "there is," says the late Prof. NORTON, "but little woody fibre; nearly everything is starch, gluten, sugar, etc., with a large per centage of water. If cut then the proportion of woody fibre is still small: but as the grain ripens the thickness of the skin rapidly increases, woody fibre being formed at the expense of the starch and sugar; these must obviously diminish in a corresponding degree, the quality of the grain being of course injured."

Early cutting is well known to enhance to a considerable extent, the value of the straw as food for animals. The experiments show about the same per cent increase in this as in the grain. The philosophy of this was shown in our recent article on "Hay and Hay-Making," in which the period of its greatest nutritive power was shown to be some time before ripening its seed. The value of wheat straw depends upon the observance of the same law, and thus it is seen that the time of harvesting, which best secures the value of both grain and straw very nearly coincides.

A saving of grain is made by early harvesting, from the fact that waste from shelling is avoided. This loss is often large in fully ripe wheat, and it is a loss no caution can avert with ripe grain. The loss from rust, also, will in most cases be thus prevented. This disease generally makes its appearance at about that stage of growth recommended for cutting the grain, and whenever it does appear, its injuries can at once be checked by harvesting.

Early harvesting allows more time for the work, so that the business of securing the crop is not crowded into a few days, in which it must be accomplished, or serious loss result from over ripening and shelling, and if the weather is bad, from growing in the ear.

The proper maturity for cutting may be judged of more accurately, perhaps, if described as that when the stalk immediately below the head, for two or three inches, becomes yellow and dry, consequently cutting off the circulation—and the grain, though soft and doughy, ceases to yield any milk upon pressure. This occurs about a fortnight before the seed becomes dead ripe, as before remarked.

In early harvesting, of course, greater attention must be given to the curing of the crop. It is advisable to allow it to lay for half a day or so in the swath before binding, and then small bundles should be made. It should be shocked up before dew falls, and will need to remain in the field for a longer time than if cut when fully ripe. Should no rain occur, (which can hardly be expected,) the common practice of setting up the sheaves in a double row, with the heads resting against each other, is simple and sufficient. Against heavy showers, however, this gives but little protection, nor is covering shocks formed in the same manner, with two sheaves laid on horizontally, the heads touching each other, a much better plan. The safest mode is to set up half a dozen sheaves in a round compact form, and cover them with two others broken in the middle, and laid on in the form of a cross, with the ends spread out, which affords a reliable cap for the shelter of the grain beneath from the usual storms of the season.

Of harvesting implements we shall not at present speak. The subject will no doubt be sufficiently agitated by those interested—the makers and users of those important inventions.

Perfection.

It has long been a proverb, that "whatever is worth doing at all, is worth doing well," and the truth and force of this remark is clear to all. Young man, are you about starting in life—are you soon to launch your bark in any of the world's currents of business, resolve upon this: "Whatever occupation I engage in, or whatever business I undertake, the duties of that calling shall be performed *well!*" A resolution thus followed out in the every-day employments of life, will, with energy and perseverance, insure success.

In no department of human affairs, should we strive for greater perfection than in that of agriculture. We say, aim at perfection in whatever you undertake Are you a breeder of domestic stock of any kind? Secure the best and most perfect animals to rear from, and be not content in breeding a fair or a good specimen, but breed the *best.* So with other operations of the farm. Is a good or extra crop of any kind of grain to be grown? Be sure that you are the one to do it. The secret of reaching perfection in agriculture, lies in the fact that you do your work well. The farmer who goes over his fields in a careless and imperfect manner, cannot expect so good a result will follow his labor, as he who is diligent, and who performs his work well.

As a general thing farmers do not half prepare the ground before putting in a crop. They think it will not pay, or are in such a hurry to plant the crop that they cannot stop to do it. Here they not only show great ignorance, but a want of that which is for their best interest. Suppose a farmer, by doing three day's extra work on an acre of land, in order to get it in as fine a tilth as possible, should, by the means, raise an extra crop of grain or roots; would not the extra amount more than compensate him for his labor, besides the improved condition of the soil. And another thing in which farmers act unwisely, is in *trying* to go over too much ground. This evil has been alluded to in previous volumes of the COUNTRY GENTLEMAN, and we will not enlarge upon it here.

There is such a thing as perfection in every branch of agriculture, and our farmers should not stop till this point has been reached. Says one man, "the corn crop has been a study with me for fifteen years, and I just begin to find out how little I know of it." We believe that this thorough study, together with the principle of doing well whatever is done, will ultimately lead to a perfect system of agriculture.

Economy of Fodder—Saving Hay.

Not a very seasonable topic, the reader may think, but still not out of time in the light we propose to look upon it. Last winter, (Co. Gent. Feb. 17, 1859,) we spoke of "managing it right" to make the winter store of forage go as far as possible, by feeding without waste, and by providing shelter, &c., for the comfort of our stock—now we propose to offer a few remarks on cutting, curing, and storing the same, with a view to the best economy of its value.

With many of our readers, the hay crop of the present year will be a short one—the season having been less favorable to the growth of grass than usual in many localities. So we must save what there is—save it closely and carefully—at the proper time. In a recent number, (Co. Gent. June 23, 1859,) will be found a carefully considered article on the best methods of making good hay—to which we would refer the interested reader. It is there shown that grass should be cut while a large share is yet in flower, and be cured in the shade—in the swath and cock—in order to secure its best nutritive qualities. It should neither be over-ripe nor over-cured, to form an article of winter fodder that will "spend well" and keep up the condition of the animals which consume it.

Meadows may be sometimes observed, in which no economy of fodder seems to have been thought of. A great deal of grass remains uncut—the fault generally of poor mowers, and a considerable share of that cut has been left in gathering, for want of better attention to raking. It is worth while this year, at least, to cut all our grass, and to rake clean what we have cut, and will cost but a trifle more in labor. A man who cannot learn to mow closely and evenly, should not be allowed to use the scythe, and the farmer who hurries so fast as to leave gaps enough unraked to pay another hand, should slack his unthrifty rate of speed for one savoring of a better economy.

In stacking hay, large losses are often incurred by small stacks with a good deal of surface exposure, and by ill built stacks, which fail to secure the hay from the weather. For stacking, hay needs to be well cured; then, should heavy rains occur, the stack, if well built, will settle firmly, and the moisture on the outside will not combine with that within to spoil the hay before it can dry again. We have known instances in which this occurred—in which hay sufficiently dry for the barn became almost entirely spoiled by a driving rain falling upon the stack soon after its completion. Large stacks should be the rule for out-door storage, in all cases in which barn room cannot be given.

To hay of inferior quality it is well to add a sprinkling of salt occasionally, when mowing away, as it will increase its palatablenesss for stock, and the same "seasoning" should be given to all hay which we have reason to think insufficiently dry for storing. This furnishes one of the most convenient methods of supplying salt to stock during the winter season, and is very generally practiced by provident farmers. It is said that a mixture of salt and lime, sprinkled freely over hay, will enable one to store it away with less curing than would otherwise be safe, and that fodder treated in this manner is much liked by catttle, &c., and that the mixture promotes the health and thrift of all stock kept upon it. Of this we have had no personal experience.

Economy of fodder, every year, leads some farmers to cut the grass along the fences in their grain fields, and all out-of-the-way spots producing grass not otherwise brought into service. It is a good plan, not only only on this account, but as destructive of many weeds which otherwise soon give a "border-ruffian" appearance to our farms, and stock the whole neighborhood with troublesome occupants. We trust this matter will be attended to by every farmer, and with greater particularity this year than ever before.

No doubt the reader can see upon his own farm, chances for economizing in the matter of saving fodder beyond what we have pointed out. We hope no one will forget to finish up as he goes—not only cut all the grass he can, but cure it well and store it safely against the wants of the coming winter.

Eradication of Thistles and Mustard.

Eds. Co Gent.—Canada thistles and mustard, are, in my opinion, two of the farmer's greatest enemies in the weed line. For when they once get fairly established in the soil, it requires a great deal of perseverance and energy to eradicate them, and even with these requisites but few persons succeed. I have known farmers to plow and mow the thistle for years in succession, and the weed still thrived and grew wonderfully, thicker if anything than when they began operations—the simple cause being that they did not go at it in a proper manner. There is no doubt but what thistles can be destroyed by mowing. I entirely killed a patch of them once by mowing them for three seasons in succession, two or three times each season. Plowing I think, however, is more effective, as it causes all seeds which are in the soil to germinate. I do not approve however, of the manner in which this is commonly done. Farmers usually, in attempting to destroy the thistle, commence plowing as soon as it makes its appearance above the surface, and continue plowing as often as it appears. This is in the spring, when the soil is wet and everything in growing order. The severed portion of the plant not only grows, sending up perhaps two or three new ones, but the root which remains in the ground, being young and tender, sprouts out, making two or three more new plants. My plan is to wait till the thistle is in blossom, which will be some time in June. The stock and root are then hollow. Begin plowing in a very dry time—a drouth if possible—plow deep and carefully. Be sure that you cut every root off. Then harrow once or twice. This will bring the thistles to the surface, where they will soon wilt and die. There will be but a few straggling thistles that will survive. Allow these to get ready for blossoming again, which will be some time in August. Plow these again as before. Let your land lay till another season, and then summer fallow for wheat. This, nine cases out of ten, will entirely destroy the thistle. If any come up in the wheat however, they should be carefully pulled out. This can be done in a wet time, with a common mitten on the hand.

The best plan that I know of for getting rid of mustard, is to plant corn for two or three seasons in succession, hoeing it carefully each season. If any mustard comes up after hoeing the last time, it should be carefully pulled out by hand, allowing no seed to ripen. Then summer fallow and sow to wheat, and seed down. Winter wheat is better than any other crop, as the mustard, if there is any left, will come up in the fall and winter-kill. If any comes up in the spring, weed it out by hand. This course, if carefully followed, will use up mustard in a short time. E. A. King.

King's Ferry, Cayuga Co.

Recent Rural Publications.

I.—Country Life: A Handbook of Agriculture, Horticulture, and Landscape Gardening. By R. Morris Copeland. Boston: John P. Jewett & Co. 8vo. pp. 813.

This work, which has been advertised in our pages, is just published, and must meet with a hearty welcome from the thousand lovers of rural life in every part of the country. It embraces the whole range of topics treated, in a competent and practical manner. It is an Encyclopedia of all farm and garden operations, pointing out the several methods of performing every item, in its proper season. Rose Culture, Management of the Hot-House, the description of Flowers, Plants, and Shrubs, and their care; Landscape Gardening, with designs for laying out small plots of ground, or extensive estates.

Too much cannot be said in commendation of the manner in which it is issued. Binding, paper, printing, engraving—all are complete in their several ways, and harmonize through the whole. The paper is of snowy whiteness and of exquisite finish; and the engravings, from those of a full page down to the initial letter, are beautiful and elegant. As a whole, it is a very fine specimen of American book-making.

Two editions are issued. The first on heavier quality of paper and more expensive binding, at three dollars; and an edition on smaller paper at two dollars. The work contains 225 engravings, and the two editions are alike in every respect, but that of paper and binding. Both are for sale at this office.

On a more careful and extended examination of this work, we shall give a full and complete review another time.

II—Plain and Pleasant Talk about Fruits, Flowers, and Farming. By Henry Ward Beecher. New-York: Derby & Jackson, and A. O. Moore & Co. 12 mo. pp. 420.

Probably there are few of our readers who are acquainted with the fact, that to the eminent qualities of Henry Ward Beecher, belonged that of a practical farmer, and an agricultural editor. Twenty years ago the author was residing in Indiana, and when there conducted the agricultural department of the *Indiana Journal*, and it was issued each month from that paper as the *Western Farmer and Gardener*. The articles in the volume before us, consist of those written by Mr. Beecher for that publication, and now collected in the volume bearing the pleasant and happy title at the head of this article.

Although written several years ago, the work has an interest and charm, seldom possessed by agricultural publications; for what theme touched by the pen of Henry Ward Beecher, does not assume a greater and more lasting value? Cowper wrote a beautiful poem on the "Heel of a Shoe," and it is said of Dean Swit, that he could write charmingly about a broom-stick. So the common-place and every-day topics of the farmer's life give Beecher an opportunity for the display of his originality and vividness of expression and simple beauty of style. He talks of the improvements in the breeds of cattle; the theory of manures; the raising of fruit; the culture of wheat, and of every topic connected with farm, garden, orchard, lawn, green-house, &c., in a way which shows at once that he is master of the theme. There is in the work a great deal of wisdom and practical common sense; a great deal of sound morals and deep philosophy; a large share of wit and originality, and an abundance of pleasant and entertaining talk about Farming, Flowers and Fruit. For sale by all booksellers.

The American Herd Book: Containing Pedigrees of Short-Horn Cattle; with Introductory Notes. By Lewis F. Allen.

The fourth volume of this work is just published, and we have received a copy from the author. It forms an 8vo. volume of 600 pages, and contains pedigrees of nearly three thousand Short-Horns; and of that number 1,153 are bulls, the remainder being cows. At the present ratio of increase in our herds, it will be but a few years before an annual volume will be required. It is understood that American pedigrees are no longer received for record by the compiler of the English Herd Book, therefore they must be published in an American one, or not at all. Many English breeders have sent here for copies of our Herd Book, thus showing their interest in the progress of our Short-Horns.

New Edition of Dr. Harriss' Work on Insects.—At the last session of the Massachusetts Legislature, resolves were passed giving authority to the Secretary of the Board of Agriculture, to obtain from the legal representatives of the late Thaddeus W. Harris, M. D., the right to print an edition of not more than 2,500 copies, of his Report on the Insects of New-England injurious to vegetation, and make suitable additions and alterations to the work. For this, the Legislature appropriated $8,000. Mr. Flint is now prosecuting his labors under the resolves, aided by several valuable assistants. Prof. Agassiz has evinced much interest in the work, and made valuable contributions to it in drawings and otherwise. It is designed by Mr. Flint to make this work specially valuable to the agriculturists of New-England, by means of full and copious elucidations of the habits of insects injurious to vegetation.

Plowing in Green Crops.

J. L. B., who wishes information on this subject, is informed that the practice of plowing in green crops does not rest on theory merely. It has been adopted by many practical farmers to great benefit, as a part of an enriching course of rotation; and where a supply of stable manure could not be obtained, or where the distance to draw it, or steep hills, rendered its conveyance too expensive, green crops have proved a most economical auxiliary. We would not however, recommend it alone, but in connection with the application of more or less stable manure, with a proper quantity of lime, plaster, ashes, &c. The objection that it is not in accordance with the "intention of nature," who furnishes vegetables as the food of animals, and the excretions or remains of animals as again the food of plants, we think hardly tenable as an exclusive rule; for some of the finest natural soils are those on which a large quantity of vegetable growth has decayed and furnished enriching materials. We can *improve* this natural process, by first selecting such vegetables as are best for this purpose, and then promoting their rapid decay by mixing with moist earth, adding animal manure to improve the whole.

Seeding Cornfields to Grass.

A correspondent of the *Rural New-Yorker*, gives his "experience in seeding one season," to the following purpose:—He planted eight acres of corn on land manured the fall previous, thirty loads to the acre—hills four feet apart, culture, level—hoed the last time the second week in July, and sowed on a peck to the acre of grass seed, husked early on the hill, and then turned the cows in. The green feed and stalks lasted until November, greatly increasing the quantity of milk and the flesh of the cows. The next spring he cut the standing stalks close to the ground, in one day, with a corn cutter. This piece yielded the largest crops, and continued to produce well the longest of any he ever seeded, out of over a hundred acres stocked down with oats and wheat in the spring. The locality should have been given, as well as the number of cows kept upon the field. The facts stated confirm what we have repeatedly urged—that "land in good heart" was much the most profitable for seeding to grass—and that it is folly to expect good meadows from fields "run" with grain as long as they will bear it before seeding.

Modes of Draining—III.

Having discussed the "advantages of draining," it may be of service to discuss also the modes of performing it. I need hardly say that different modes have been adopted, and with different degrees of success; but that generally regarded as the most efficient and economical for wet, clayey land, is what is termed *frequent* or *thorough* drainage. This consists in constructing drains from two and a half to four feet below the surface, and about sixteen feet apart, with a gentle fall, so as to carry off any surplus water which may accumulate.

Deep drainage was first introduced, and for a time was practiced to the exclusion of all other, if we except mere surface drainage. It consisted in laying drains some six feet below the surface, and from forty to sixty feet apart. For springy lands this mode has its advantages, but for ordinary uplands, which are likely to be benefitted by draining, it is not the plan now most approved. As remarked, for lands of this description, *frequent* or *thorough* drainage is found most beneficial. In conducting the work, numerous drains are opened in close proximity, and of the requisite depth, at the bottom of which are placed drain tile, stone, or other material, so as to leave an aperture for the water to pass after the ditch is refilled.

Of all the material used, drain-tile is to be preferred when it can be obtained at a reasonable cost. In England it is almost the only material used in the construction of drains, and is found to be the most economical and serviceable for all ordinary purposes.

In this country its use has not become sufficiently extensive to encourage very numerous manufactories, and its price, and the expense of transportation, often render its use questionable, as a matter of economy, where stone can be readily obtained. But the materials at hand, the question then arises, "how deep shall the drain be made?" I have stated that in "thorough drainage" the practice varies; but I think the more common opinion is that it ought to be not much less than 3 feet deep. This much is manifest, it ought to be so low as not to be disturbed by deep tillage, or affected by frosts. If tiles are used, frequent freezing and thawing will cause them to crumble, and the drain will become useless. Besides, shallow drains often become obstructed with the roots of vegetable growth, and thus the water is thrown back into the land.

Drains 4 feet below the surface meet with their main objection in the cost of construction; the last foot of the four, often costing as much as the first three, so far as excavation is concerned.

Another circumstance should be mentioned in this connection. It is, that additional depth will not compensate for increased distance between drains. Experiments have shown that 4 feet drains 27 feet apart do not operate as well as 3 feet drains 16 feet apart. In the former case the land at the extremity between the drains often remains too wet, and consequently crops do not thrive as well as on their borders; whereas, the 3 feet draining, in close proximity, gives a uniformity to the degree of moisture over the whole surface, and an evenness of crops is the result.

I am here reminded of the answer I have often received to the question: "Do you drain your land?" "Oh yes," says the interrogated. "I dug a ditch 40 rods long, and 2½ feet deep through a ten acre lot, filled it half full of cobble stone, and covered it over, but I don't see as it did a bit of good, except just along the sides of the ditch. On the whole, I don't see as ditching does much good."

Such are the conclusions at which many of our farmers arrive, from practices such as that above described. But let them adopt the system of "thorough drainage," which it has been the object of this paper to discuss, and I marvel if they do not come to widely different conclusions from those reached by having laid a single drain through a wet ten acre lot. R.

Advantages of Irrigation.

Messrs. Editors—The following is translated from Dr. Girardin and du Breuil, on irrigation:

Vegetation cannot put forth a rapid and vigorous growth unless constantly supplied with a certain amount of moisture from the soil, for this favors the process of germination, hastens the decomposition of manure, and serves to convey the elements which nourish the plant, to its roots; and finally, renders the soil so porous that the air and young roots can easily penetrate it.

The greatest drought occurs during the summer, and this time is the most dangerous, because then the plant has the greatest need of absorbing watery substances through the roots, in order to replace and supply the loss occasioned by the evaporation going on so rapidly in its leaves.

Wherever systematic irrigation has been for a long time practiced, the beneficial effects produced in the nature of the soil—indeed the appearance and productiveness of a whole region of country, is observed to be changed.

All waters, even the purest, deposit, especially during heavy rains, a portion of costly manures, as slime or mud, and retain certain soluble salts in solution, as magnesia, lime, gypsum, potash, &c., which, during irrigation are transferred to the soil, whose properties are by these means improved. In addition to the substances already introduced, come the gases—carbonic acid and ammonia, which, combining with the former, repreresent all the elements necessary for a vigorous growth of vegetation; and therefore it is evident that all of the effects produced by manure may be replaced by irrigation.

Concerning its importance, Bousingault very correctly said, particularly in reference to meadows—"if a field is not of itself rich enough to render a copious supply of manure unnecessary, it can never be profitably cultivated for a great length of time unless in connection with a meadow." Or, in a word, and on the previous supposition that the soil does not possess a sufficient quantity of inorganic substances to supply directly, without the use of manure, the alkaline and earthy salts to the soil, which have become exhausted through continued cultivation, something must be expended every year in replacing the elements carried off by the previous crop. For this reason are lands flowed and enriched by streams, the only ones which allow of a continual exportation of their products without suffering deterioration.

To such belongs the valley of the Nile, and it would be difficult to form an idea of the immense quantity of phosphoric acid, magnesia and potash annually carried out of Egypt in grain.

Irrigation is without doubt the most simple and economical means of increasing the fertility of a field conveniently situated, because it affords fodder in abundance, and in consequence a good supply of manure. The mineral and organic substances which the water often contains in such minute quantities as to escape entirely analysis, are discovered by the plant and taken into its organism, just as they absorb those gaseous elements which are diffused in the atmosphere in a quantity not exceeding a few ten thousandths, at the same time transforming and condensing them.

In this manner the plant gathers to itself and gives a new form to those substances, which, being dissolved in water, are diffused through the soil and air in order to facilitate their reception and appropriation by animals.

Nothing further is necessary to explain the advantages of irrigation; but to derive the most profit from it certain conditions must be fulfilled, which at some future time we will endeavor to illustrate.

I send the above as an introduction to a few articles on irrigation. S. K. Smith. *Stockholm Depot.*

How Drouth Benefits the Soil.

"Dry and hot! Hot and dry! How much everything suffers for the want of rain!" exclaims the farmer, as the empty clouds melt, day after day, from his sight. And it is a sad scene now presented in many places in the country. We need not recall it for our readers—we would rather invite them to a brighter side of the picture. That seasons of drouth—so often occurring, and so injurious to our summer crops—should still prove beneficial to the soil, seems strange, but chemical science shows us that drouths are one of the material causes to restore the constituents of crops, and renovate long cultivated soils. The "why and wherefore" of this, we may here reproduce, condensed from a paper by Prof. Higgins, Chemist of the State Ag. Society of Maryland.

The loss of mineral matter from the soil, results from the fact that it is taken up by growing crops, and also carried away by the surface water flowing into streams, and thence into the sea. These two causes are always in operation, and were there no sources of supply, would in time render the earth a barren waste. The diminution which arises from continued cropping, is in part restored by manures, and the same is true of the constituents washed from the soil by surface drainage; but this supply is small, uncertain, and of limited application, and Providence has provided natural means to restore lost mineral constituents to our arable land. At intervals, drouths occur to bring up from the deeper undersoil, food for the use of plants when the rains shall again fall to dissolve and bring them into action.

A drouth acts upon the moisture in the earth as follows: During dry weather, a continual evaporation takes place from the surface soil, above that supplied by rain and dew, which creates a vacuum (so far as the water in the surface soil is concerned,) that is at once filled by water rising from the subsoil—extending deeper and deeper as the drouth continues and the moisture is exhaled—a circulation of water in the earth the reverse of that which takes place in wet weather. This progress to the surface of the water in the earth, manifests itself strikingly in the drying up of springs and wells, and streams which are supported by springs.

Not only is water thus brought to the surface of the earth, but also all that the water holds in solution. There are salts of lime and magnesia, of potash and soda, or indeed whatever the subsoil or top strata of the earth may contain. The water on reaching the surface is evaporated, but leaves behind its lime and potash, its phosphates, silicates, carbonates, and salts—all indispensable to the growth of the vegetable products of the farm. Rain water, as it falls, will dissolve but a very small portion of some of those substances; but when it sinks into the earth, it then becomes strongly imbued with carbonic acid from the decomposition of vegetable matter in the soil, and thus acquires the property of readily dissolving minerals on which before it could have little effect.

Several experiments tried by Prof. Higgins, go to show this action of drouth in bringing mineral matters from a depth to the surface of the soil. In one case he placed a solution of chloride of barium in the bottom of a glass cylinder, and then filled it with dry soil. After long exposure to the rays of the sun, the surface of the soil was tested with sulphuric acid, and gave a copious precipitate of sulphate of baryta. Chloride of lime, sulphate of soda, and carbonate of potash, were experimented upon in like manner, and upon the application of proper tests, the surface of the soil showed their presence in large quantities, drawn up by the rising of water from underneath, as in the case of drouth.

The parched earth—all vegetation dwarfed and withered by the heat—seems suffering under a curse, but it is only an affliction for the present—"a blessing in disguise" for the future. "The early and latter rain," may produce at once abundant crops, but dry weather is needed to bring to the surface from the depths of the earth, where else it would be forever unemployed, food for future harvests. It is Nature's ordinance for keeping up the fertility of the cultivated soil.

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Remedy for the Wheat Midge.

Eds. Cultivator and Co. Gent.—The all-absorbing topic just now, is the midge, on which I wish to address a few words to your numerous readers. The fly makes its appearance here about the 17th or 20th of June, in countless numbers. It may be seen early of a morning, or towards the close of evening, on every ear of wheat. They deposit a quantity of infinitessimal eggs, of a dark orange color. A few days suffices to bring them to maturity if the weather is warm. The maggot or small worm at once commences its ravages. (Under a powerful microscope I cannot discover it has any legs.)

The question now for our solution is—Is there no way to get rid of this pest? I believe there is, and if I am right, and many of your agricultural readers can soon judge for themselves, it will prove a greater source of wealth to the farmers than digging gold at Pike's Peak or California.

During a late residence in England of several years, I was often much annoyed by a neighboring farmer constantly using the gas lime procured fresh from the works, about four miles distant from his farm. I was aware he intended destruction to the insect tribe, but knew not the way it was applied, until the report of a meeting of the Royal Agricultural Society of England was forwarded to me, where Mr. Fisher Hobbs, one of England's pattern agriculturists, stated that for annihilating the turnip fly he used the following preparation: One bushel of gas lime or white gas ashes, fresh from the gas house, one bushel of lime from the kiln, six pounds of sulphur and ten pounds of soot, well mixed together, and got to as fine a powder as possible, so that it may adhere to the plant. The above is sufficient for two acres. It should be applied very early in the morning, when the dew is on the leaf. By this means 200 to 220 acres of Swedes have been grown on his farm annually for eight or nine years, without a rod of ground losing plants. The above is a strong dressing to be used when the fly is very troublesome, and has never failed when applied at night. The system, he adds, here recommended, is founded upon my own practice and experience.

The above, then, is my remedy for the midge, applied just as the ear makes its appearance, sown broadcast over the field. I am induced by the above results to conclude that by care and attention the wheat may be as effectually and as certainly freed from the ravages of the midge fly, as it has been for upwards of the last 20 years from smut and other destructive fungi in England. Farmers try it, and send your experience to the editor of the Country Gentleman. George S. Rogers. *Woodlands, Delaware, C. W., July* 8.

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Aloes to Destroy Bugs.—A correspondent of the London *Cottage Gardener* recommends bitter aloes to destroy the aphis and other insects. The receipt is, to mix half an ounce of aloes with a gallon of warm water, and apply it to the infected plants by means of a syringe or watering can, and, he says, "before half an hour you will have clean plants." The correspondent states that he gave this application to his rose trees and cucumber plants last season, and it not only cleansed the plants at the time, but there was not one in all the season after; and it does not injure foilage in the least. It is also well known that a solution of aloes is fatal to the common bed-bug. As it is a cheap drug, we recommend its trial by our readers.

The "Universal Plow."

Messrs. Editors—In the Co. Gent. of May 12, I made mention of the above named plow. Since that notice, I have received many inquiries, by letter and otherwise, respecting it. In my notice of the plow, May 12th, I stated that I had recently procured one, with a portion of its different mould-boards, which, when seperately used, are equivalent to some five or six different sized single or common plows, and also stated that I should give the plow a fair trial, and then report to the Co. Gent. the *result*, "without fear, favor or prejudice," and now attempt to redeem my pledge, by describing the plow I have, and its different mould-boards, and the team required, and the work it performs.

My plow is the invention of Col F. Holbrook, of Brattleboro, Vt., and this *fact* is a sufficient guaranty of its being a first rate implement; and I take the liberty of making a short extract from a letter recently received from Col. H., in which he says: "I have devoted a great deal of thought and practical experiment to the plow, and have at length studied up the 'Univeral Plow,' believing that any farm, to be rightly and thoroughly cultivated, needs a variety of forms and size of plows, and, therefore, that some more economical mode should be devised, by which our farmers may have this desirable variety within a reasonable expense, or rather should be able to procure the variety cheaper than by buying entire plows each time. You will easily reckon for yourself, that in the 'Universal Plow' a farmer, after procuring one plow complete, may at any time afterwards add, in effect, other forms and sizes he may wish, by simply buying a mould-board alone, and thus he is relieved of the greater expense of purchasing entire plows, and save himself the trouble of storage."

"I fancy that the 'Universal Plow,' in addition to combining a wide variety of work in one implement, also does an excellent quality of work in each size and kind respectively." I can safely vouch for the correctness of the above statement, as to the perfect manner in which the various mould-boards perform their work.

As a sod and subsoil plow, with a wheel, it works admirably, drawn by a yoke of oxen and one horse. For very deep plowing, a stronger team would be desirable. The share of the forward or skim-plow cuts wider than those of some other patterns I have seen; this, I think, is an improvement over the more narrow shares. The forward plow can be easily raised or lowered, to correspond with the desired depth of plowing; where the ground is level and smooth, I think the skim plow should not cut deeper than from two to three inches. The rear or large mould-board used as a double plow is numbered 152. By taking off the skim plow, and clasping the cutter to the beam, the plow then, with its mould-board 152, is the one used for plowing stubble and old ground. It can be worked at various depths, with a pair of horses or oxen; as such I have used it, and believe it the best stubble plow I have ever seen used. The form of the mold-board is peculiar and new, and gives a remarkable turn to the furrow slice, and buries the surface thoroughly, lightening up and leaving the inverted soil in the best possible condition.

By removing the mold-board 152, and putting on that numbered 122, we have a first rate greensward plow for intervale or other smooth land, for turning flat furrows, from five to eight inches deep, twelve to fourteen inches wide. This is for two horses or oxen, and not hard work for them either.

Take off mould-board 122, and replace with that marked 141; this is designed for plowing greensward on stoney and rough upland—team, two or three cattle. The turn of this mould-board is short, and broad on the bottom, to clear the stones from the furrows, and turns them handsomely, leaving a wide track for the off ox to travel in. It takes about three minutes to change the mould-boards.

Then there is mould-board 120 for intervale or other smooth grass land, for flat furrows. This mould-board is very long, with a corresponding shoe or land-side, and is intended to be drawn by four cattle, plowing from 7 to 10 inches deep, and from 14 to 16 wide. I have used this with ease, with a yoke of oxen and a horse, turning a furrow 16 inches wide, and 8 deep. The short land-side and mould-board can be taken off and the longer land-side and mould-board put on "inside of six minutes" by the watch. I have only described the mould-boards, &c., that I have, but there are several others—twelve in the whole; some designed for rocky upland, others for plowing clay, and others stiff sod, lapping the furrow slices one upon another at an inclination of 45°, and two sizes of stubble mould-boards. But the whole accurately fitting one common standard and frame-work. The farmer can purchase as many or as few of the mould-boards as he chooses, and that farmer must be hard to please who cannot find in these dozen mould-boards one, or more, to meet his wants. All the plows I have described are cast-iron, but the manufacturers of the above plows, Messrs. Nourse, Mason & Co., of Boston, Mass., have also got up a series of the "Universal plow," made of steel, purposely designed for the prairie and other fine soils of the west, as from the fineness of the soil, and lack of flinty matter, the cast-iron plow clogs badly. Steel being a finer and less porous metal than cast-iron, and less affected by rust, and requiring much less friction to give it a high polish, is considered the more desirable material for the construction of the mould-board, share and land-side of plows for working such soils.

Every part of the "Universal Plow" is made of the best material, and finished in the most perfect manner, and the plowing done by the different mould-boards is of a superior quality. There has been a great amount of science, skill and mechanical ingenuity called into requisition in the construction of this plow and all its varied parts, and I can most cheerfully and disinterestedly recommend it to the favorable notice of my brother farmers who wish for a first rate plow—or rather a a series of plows at a moderate expense.

Any one wishing for farther information as to prices and form of plows and mould-boards, can doubtless obtain a catalogue of Messrs. Nourse, Mason & Co., by writting a letter to them, enclosing two or three three cent postage stamps. L. Bartlett. *Warner, N. H.*

Why I Like The Cultivator.

First. Because it is exclusively an agricultural paper.

Second. Because it is published in pamphlet form, and of a suitable size to stitch together when the volume is completed.

Third. A valuable index is added to each volume.

These three peculiarities make it a convenient means of storing away valuable agricultural matter, so as to be convenient for reference. I do not like too much reading on agricultural or any other subject, and for this reason I like The Cultivator better than other papers of its kind of a larger class. It is better to read a little and remember it, than to read a great deal, and forget the whole. Besides, in a large paper, many of the best articles would not be likely to be read at all. But the advantages The Cultivator offers for preserving valuable matter, it seems to me is of great importance. J. L. B.

Milking Heifers.—A correspondent of the *Boston Cultivator*, states that he has for a number of years past, milked his heifers once a day for two weeks before their first calves, with the best of results.

Fenceing at Home and Abroad.

Heidelberg, June 10, 1859.

Messrs. Editors—One of the peculiarities which strike an American in traveling on the Continent, is the absence of fences.

For hundreds of miles here, he will not see a single field inclosed, and scarely a yard or garden in all that distance, except it be in a city or town, and then generally with expensive stone walls.

Division lines are marked with cut stones, set at the corners and angles.

Up to these lines the occupiers on each side till and crop, without loss of ground or expense of fence.

Here every man takes care of his own, not his neighbor's cattle, and if any one chooses to pasture them, he does so by confining them in some way to his own ground. Many villages and towns, both in Switzerland and Germany, have a kind of public pasture and forest, to which its citizens have a right, for purposes of feeding cows To avail themselves most economically of these, the cows are generally collected in the morning by one, two, or more herdsmen—men, boys, women, or dogs—driven out, taken care of through the day, and returned at night. Nearly every one of these cows has a bell upon its neck, and it would seem as if each was of a different tone from any other. "The music of the cow bell," then, is no myth in Switzerland and Germany, and really it is very enlivening. Single cows are sometimes led out and fed for a while by the side of the road, or other places, always held by a halter, and kept within entitled limits. All these, however, are exceptions, for besides these, and such as are kept for a few weeks in the summer, on the high and otherwise unproductive slopes of the mountains, cattle on all the Continent are soiled, and not turned out to pasture as with us. When they are out, however, under any circumstances, there is always some body to take care of them, and it is perfectly amazing to see with what precision the herdman's dogs are trained to feed them up to, and only to, particular lines, whatever the temptation.

Sheep, on the Continent, wherever kept, and it is only in particular districts they are so, are always put out in the day time and confined at night. Like the cattle, when out they are always kept within bounds by a shepherd and his dogs Sometimes, in order to feed them close up to a railroad or a field of grain, a hurdle fence is temporarily placed along the line, but this is not often the case.

This absence of fences adds immensely to the beauty and impressiveness of the country, as it does to its productiveness; but more than all, and infinitely above all other considerations, to the enormous saving of expense, compared with our fences.

I think I have seen it stated on what I deemed to be good authority, that fences in our country cost as much as all the other buildings there. If this be so, and whether it is exactly so or not, it undoubtedly approximates the fact, seeing all these must be renewed many times to the other buildings once, and what an enormous sinking fund it is—what a draft upon the industry of the country. It is equal to the tax for a standing army here—to that to pay interest on the national debt of England.

If it should be said we cannot do entirely without fences, and that consequently all this could not be saved, so may it as well be said we cannot do entirely without barns, and therefore every man shall build half of one for his neighbors and a whole one for the public, and all this without regard to his own wants or convenience in such matters. The expense of hersdmen and shepherds with their dogs, is as nothing to the time consumed in building fences, to say nothing of material. We, Messrs. Editors, are undoubtedly *the people*, our country *the country*, and our laws *the laws;* but as "it is not all gold that shines," so it is not all dross which we do not look upon, and I can but think we have yet something to learn in this direction. Common law with us, requires a man to take care of his own family—why not of his own cattle, by fencing them in on his own land, or otherwise, as he chooses?

The roads here, which are themselves as perfect as art and stone can make them, seem to run directly through the fields of grain, meadows, gardens, &c., with nothing to indicate the line further than the eye can follow the bare track, between the green walls of growing crops, or, as is very commonly the case, long rows of magnificent chestnut, pine, mulberry, or Lombardy poplar trees. The border of these roads even, up to the very track of the wheel, are cultivated as highly, or as fancifully, as the case may be, as any other part of the field or garden. About the railroad station too, I notice (what traveler does not?) that every available foot of ground is made tributary to taste and skill in this way. All the grounds belonging to the company, on each side of the station-house, not absolutely required for the business of the road, is devoted to flowers and flowering shrubs. The outhouses frequently stand in the midst of these, and, as well as the windows and walls of all the buildings, are thus subsidized to taste and comfort.

It is difficult to realize what a cheerful, home-like feeling all this gives a traveler. The flowers are the same we have, and with the light and air, are an universal inheritance. We recognize our right here, and enter into possession of the enjoyment, paying our share of the expense, and so feel quite at home, but not as if on an American railroad. "Pity 'tis, 'tis so"

The banks of all these roads, (whether rail or common,) the excavations, fillings, and burrowing-pits, are as nicely formed and graded as the plots in our garden—are covered with rich mold, cultivated and cropped as are the other grounds. These are never destroyed by cattle running at large, as with us, on the common road; nor are they suffered to grow up to thistles and wild brush, as there. V Q.

Chess once More.

Near Geneva, 25th June, 1859.

Messrs. Editors.—A neighbor of mine has part of a field sown with winter barley; the other part winter wheat. The part sown with barley has, I think, four times more chess on the land than barley, and there is no chess in the wheat. I could not find a single head of chess in the wheat, although I went round a good part of the field. I asked the owner if the barley was clear of chess when he sowed it. He said it had plenty in it when he got it; but he cleaned it all out. I then asked him how he accounted for it, being a full crop of chess with a little barley. He said he believed barley was subject to produce chess, as his son-in-law a few years ago sowed clean barley, and he had a great deal of chess too; and he believed it was subject to produce chess. The land that his barley is on, was worked in the same manner as that the wheat is on, only a little better.

Now, I would ask Mr. Clizbe how this comes, that there is certainly four times more chess than barley, and none among the wheat? Has the barley turned into chess, or did the owner not clean the chess out of his barley, or at least did he not leave enough among the barley to ruin the crop? The chess now stands from twenty to thirty inches higher than the barley, and the owner says it was much taller last fall, although he did not then know it was chess, and it choked the barley so that it was not worth the harvesting, while the chess is a beautiful crop; now, if Mr. Clizbe, or any of those obstinate transmutation gentlemen chooses to come and see this crop of chess with a little barley in it, and will write me when they will be at Geneva, I will meet them at the railroad station, bring them out, show them the field, keep them over night, and take them to the station next morning; and if that don't enlighten their understandings and dispel their prejudices, nothing else will. The owner of the field is a good honest farmer, a Pennsylvania German, who has been a neighbor to me ever since I lived here. If Mr. C., or any other man, chooses to come, if they don't find it as I have stated, I will pay their railroad fare here and back. John Johnston.

Raising Balsams, Blackberries, Apples &c, from Seed.

Messrs. Editors—Will you please inform me through The Cultivator, the best manner of propagating balsam trees—also, of propagating blackberries from the seed? And if you can give me any information concerning the best time to plant apple seeds after they are taken from the apple—whether it is best to plant them immediately, or whether it will do to let them dry, you will much oblige. W. L. H. *West Winsted, Ct.*

Young balsams are most cheaply procured in this country from woods and swamps, this being the general mode practiced by nurserymen. They may be raised from seed by sowing in a fine rich mould, with a dry or drained bottom, and covering about a fourth of an inch deep. This surface must not be made wet, but kept constantly moist by a screen or cover, and the young plants when up must be similarly shaded from the sun. They will grow very slowly the first two or three years, and our correspondent will get out of patience with their tardiness, and procure larger plants elsewhere. Some nurserymen make it a prominent part of their business to procure these plants and furnish them cheaply at wholesale prices.

The blackberry may be raised from seed by washing out the seed from the ripe berries, mixing them with moist sand and keeping them moist by burying in the soil under a flat stone, and sowing in rich mellow earth very early the following spring, half an inch deep, and keeping the soil uniformly moist by a moss, mat or cloth covering.

Apple seeds will grow if not very dry, but they are more certain when kept moderately and uniformly moist. When *very* dry, the horny covering has become too hard; and they are then benefitted by scalding, taking care to scald in quantities of not more than a pint at a time, or in a broad very shallow vessel, so that the water may quickly cool; for if in large quantities, it will remain hot so long as to destroy the germ.

Why Horses Bite their Cribs.

This question seems very sensibly answered by A. S. Hall of Malden, Mass., in the *N. E. Farmer*, and we give the substance of his reasoning on the subject:

Colts are raised in the country, and live for more than half the year in pasture; when old enough to work, they are usually much confined, and especially so when brought to the city; they are changed from their natural life of grazing, rolling and stretching at length on the ground to rest—and as the Hebrews longed for the flesh-pots of Egypt, so they hanker for their old pastures in the country; and in their longings gnaw their cribs and hitching posts, and every sleigh and wagon back they stand next to.

Mr. H. gives two cases in which this propensity for gnawing was cured in a short time. One horse gnawed through the bottom of a two-inch plank manger in three week's time. After this he was put out in a little yard, to pick some grass and ground, and roll, for one hour at a time, if he could not spare his services longer. In four or five weeks he was almost entirely cured. Another horse equally inclined to gnaw, was cured in two weeks, by being allowed to roll two or three times a week, and a chance to gnaw the frozen grass in the fence corners. Two other horses owned by Mr. Hall, have been cured by like simple treatment, and he recommends those who can do no better, to provide a barrel of fresh earth, and a soft place to roll on, for their horses, and they will find them more healthy and less inclined to gnawing everything within reach.

Every horse owner may have observed that horses at pasture seldom practice this habit, and the same is true of cattle and other domestic animals.

Soap Suds for Peach Trees.

Messrs. Tucker & Son—Is soad suds considered good for peach as well as apple trees? In what proportion should the soap and water be, and how and when should the application be made? R. *Franklin Depot, Va.*

We have found soap suds to be beneficial to peach trees, and they would no doubt generally prove so. As commonly used they are very largely diluted, and in this state, and applied broadcast many feet about the tree, could not possibly do any injury. More caution might be necessary if the soap was in a more concentrated form, and applied closely at the foot of the trunk, yet we have never known any injury of the kind. Soft soap, without any addition of water, is often used for the bark of trees without any bad results. It is not advisable to manufacture soap suds on purpose for trees, as potash may be used in a cheaper form in ashes—they are applied merely as refuse matter.

Growth of Calves.

Messrs. Editors—I send you the increased weight of three Durham heifer calves, from May 17, till June 10, a period of 24 days. Their feed was new milk, night and morning, and grass during the day:

No.	*Weight, May* 17.	*Weight, June* 10.	*Gain.*
1,	200 lbs.,	264 lbs.,	64 lbs.
2,	250 "	330 "	80 "
3,	290 "	366 "	76 "

This would give per day for No. 1, $2\frac{2}{3}$ lbs.—for No. 2, $3\frac{1}{3}$ lbs., and for No. 3, 3 1 6th lbs. W. M. *Pulaski, N. Y.*

A Bundle of Recipes.

From the letters of our correspondents we condense several valuable recipes, and present them in a single article:

To Remove Films from the Eyes of Cattle.

I have not found a surer remedy than finely pulverized earth, occasionally blown into the eye through a quill. T. R. W.

Cure for Horn-Ail, or Hollow Horn.

If the hair of the end of the tail is in rolls or curls, cut off one inch of the tail. Then turn the animal's head on one side, and pour boiling water upon the lower horn till he dodges, and then take the other horn. By this time the animal will sweat, and 3 or 4 ounces of mustard seed ground, should be given in some kind of feed. P. L. Evans. *Richburgh, N. Y.*

Wash for Wounds, Corks or Collar Galls.

1 oz. white vitriol, 1 oz. copperas, 1 table-spoonful gun-powder, 1 qt. soft water. After washing the parts with hot soft water, and wiping dry, apply the above wash with a sponge or cloth. H. *Fulton.*

Cure for Fistula or Poll-Evil.

Procure a handful of Poke roots, put in one gallon of water, and boil till the strength is out—after which, boil down the liquid to one quart. Then add half pint spirits turpentine, and half pint oil of spike, and simmer away to a quart. Add 4 oz. blue vitriol, and it is ready for use. Wash the sore with soap suds, and when dry, apply the liniment once a day. C. F. W.

Attendance at Fairs.

As the season is rapidly approaching when our annual exhibitions of the various Agricultural Societies is to take place, it may be well to say a word or two upon it at this time.

A great many farmers and their families live so remote from places where exhibitions are to take place, that they can only attend one day out of the three or four devoted to the whole show, and to make the most of a brief time should be the prime object with all.

It is generally the case with those who attend fairs, that on coming into the grounds, they begin to "see what is to be seen" in the most imperfect and hurried manner possible. They pass through the several departments of horses, stock, implements, and in the tents of manufactured articles, with a rush; not stopping to look at anything a minute, but gazing at the whole with a hurried and superficial glance. So they pass from one point of interest to another, and at length they have jammed through the crowd and seen the whole! But what do they know of what they have seen, or what can they tell of a single article? Ask them, (after the Fair,) if they noticed such an object—a machine of curious and peculiar workmanship—and they will answer, "No." "Why you should have seen that," is the response; but in the bustle and crowd they hurried along—saw a good many things, but noticed nothing. The only thing connected with the exhibition which they remember, was, they saw a great many people, and were in a hurry and crowd all the time.

Now let us tell you how to see all that is really worthy of particular attention—even at the State Fair—in a brief space of time.

In the first place, settle the fact before starting, that all cannot be seen. To be better understood, if you were to give any degree of attention, or even note, to every article presented for exhibition, it would take you a whole month, and then perhaps it would not be accomplished. So we mean simply this: make up your mind to give attention to the really valuable and interesting objects, and pass by those which are ordinary or common-place. If you are interested in the department of cattle, pass by the good stock; but when you see something more than that—something extra, or having some remarkable features,—make a brief note of it and pass on. In this way go through all the departments—which can in this manner be accomplished in less time than one would suppose. Have a note-book, or a slip of paper, and where an article of greater importance presents itself, note it down. In this, you economize your time—have a better idea of the whole exhibition, and come away with much practical knowledge of the affair, and with a good idea of some interesting features, which were worthy of special attention, and not with a confused mass of objects, about which you know nothing.

The great object and chief end of our agricultural fairs, should not be lost sight of. They are indeed, the farmer's holidays; they come at a season when the more severe and harder labors of the farm have been brought to a close—when the golden harvest has been gathered in, and it is fitting that the hard-working farmer, with his family, should indulge in that relaxation from toil, and in the pleasurable and instructive exercises which our fairs afford. But let us repeat it again —make your attendance at the coming exhibitions of our agricultural societies, not only a recreation, but a means of improvement in the various branches of Rural and Domestic Husbandry. No better opportunity can possibly be had, if rightly improved and made use of. Do not therefore, go with only a thought of passing away the time, or of spending it in an indifferent manner; but go to think and study—to talk with your brother farmers, and to examine the stock, implements, and produce brought to the exhibition by them. Then will it be a useful attendance, and you will return home with a fuller determination to work, and to accomplish something greater than you have yet done, in this your most noble occupation.

Vitality of Seeds.

The seeds of many kinds of plants possess a wonderful vitality, and we often find our fields strangely seeded, perhaps, from plants grown hundreds of years ago We have seen instances where a luxuriant crop of mulleins was produced, by plowing pastures on which none of these plants had been seen for many years. The same is true of sorrel, which, we think, will lie in the soil without growing, until "the peculiar acid which gives life and sustenance to the weed," again is formed in the soil. It is a strange fact that land rooted over by hogs, should so often produce Mayweed, and we have seen it affirmed that it was invariably the case. We have known turnips to grow from seed sown twenty years before on newly cleared land, many plants appearing after the first and second plowing. The field had been in pasture meanwhile.

Stretches in Sheep.

Can you give me through the THE CULTIVATOR, a remedy for the so called stretches in sheep. I have tried several remedies recommended in agricultural journals, but without effect. I want some one to give me a reliable and effectual recipe for its cure, if there is one. J. A. MORRISON. *Sullivan Co, N. Y.*

In The Cultivator for 1858, page 159, A. G. Webster, of Union Mills, Ind., states that after having tried a number of remedies to no effect, and having lost several sheep, he has since cured those of his flock who have been affected with this disease, by giving them red pepper tea. Take two or three pods, put them with water and steep, and when cool give two doses a day, if the first does not afford relief.

Ticks and Lice on Sheep and Cattle.

Open the wool on the back of the sheep, from the head to the hips, and strew in a tea spoon of yellow snuff, mostly on the neck and shoulders. This treatment has proved effectual with me, in removing ticks from sheep, and it is easier and safer than washing with a solution of tobacco. For lice on cattle, mix yellow snuff with lamp oil, and rub on where they will not lick it. I have known several calves killed by washing them in strong tobacco water. A READER. *Willow Valley. R. I.*

THE SCIENTIFIC AMERICAN.—This useful and popular journal has just passed from an old series to a new. It now contains sixteen pages weekly, and is furnished at the former price, two dollars per annum. As a scientific publication, its long establishment is proof of its usefulness and reliability. Address MUNN & Co., 37 Park-Row, New-York.

Mr. Hunt's Cow.

Gentleman Editors—In your issue of May 12th, I noticed some remarks from your Ithaca correspondent, in which he seems to imply (or I imply it for him) that the statement given of the products of my cow for the last season, were rather steep, and wishes a statement in regard to her; and as you have requested me to comply with your correspondent's request, I most cheerfully do so.

And first, she calved along the first days of April. As the calf was taken away when four or five days old, we commenced making butter on the eighth. Her feed was, in addition to hay and grass, her own milk, with just bran enough put in to make her eat it. She gave milk during the whole year, and the amount of butter made from April 8, 1858, to April 1, 1859, was as follows:

April,	41 lbs.	October,	45 lbs.
May,	60 "	November,	38 "
June,	74 "	December,	30 "
July,	55 "	January,	26 "
August,	50 "	February,	25 "
September,	49 "	March,	23 "
Total,			516 lbs.

I can only trace the family of this cow back to 1832. Her granddam was raised by Joseph M. Chafee, a farmer of this town, and I bought her of him in 1839, then seven years old. I soon found that she was an excellent cow; and frequently, when I sold the butter and weighed it, I found she made from fourteen to sixteen pounds per week. I kept an account of the amount of butter made from her one season, but as the account has got mislaid, I cannot give the exact amount, but it was over 480 lbs., with five in the family all the time, and two boarders a part of the season. I owned the old cow ten years, and sold her at seventeen years old.

The dam of this cow I sold when a calf, four or five days old, to Bela Short. He kept her until three years old, when she had this calf, and died shortly after, but had every appearance of being a good cow. Mr. Short kept this calf until it was two years old, and sold her to George Cranphin, of Lebanon. He kept her until fall, and sold her, with others, to Mr. Willecokson, of our village, for beef, and I bought her of Willcockson as he was taking her to the slaughter house to kill, and have owned her since. She is thirteen years old this spring, good size and body, and very heavy hind quarters; of a yellowish tan color, with a very yellow skin. She had her first calf in the spring of 1849, ten years ago, and I have no doubt but she has paid for herself, at $50 each year, and her keeping.

I would here say, that I had no anticipation at the time of publishing the amount of butter made during the season, and did not therefore make any extra effort to see how much could be made. My daughter having the management of the milk and butter, for her own satisfaction weighed and kept an account of the amount made, and I will give you her figures for each churning during the month of June, 1858—her rule was to churn twice each week, Tuesdays and Fridays, as follows:

June 1st,	8lb. 6 oz.	June 18th,	8lb. 0 oz.
" 4th,	6lb. 1oz.	" 22d,	10lb. 0 oz.
" 8th,	9lb. 4oz.	" 25th,	8lb. 5 oz.
" 11th,	8lb. 5oz.	" 28th,	7lb. 7 oz.
" 15th,	8lb. 4oz.		
Making			74lb. 0 oz.

The difference in the amount made in each churning may be accounted for in the amount of milk and cream used in the family.

It may be interesting to some to know how we manage the milk, so as to make it yield the most cream. We never put it over two inches deep in a pan, and I have no doubt that if our dairymen would use double the number of pans to strain the milk into, they would find it to their advantage. Let them try the experiment. O. Hunt.
Eaton, *June* 23, 1859.

Summer Care of Cows.

A Delaware Co. dairyman, writing to the *Ohio Cultivator*, says cows should never be kept in the yard through the night after milking, if they can be turned into pasture; in hot weather, when flies bite severely, night pasture is of as much benefit to the cows as feeding by day. He changes his cows from one pasture field to another every week, if possible, and says "they will do a great deal better, give more milk, and make more butter," if thus managed. Never drive cows faster than a walk; never kick, pound or yell at them when milking; cows cannot have too kind treatment to do well—cruelty and carelessness will render the best cows unprofitable.

In regard to feed, the writer thinks the natural grasses, such as June grass, etc., make the richest and sweetest butter. Clover and timothy are the next best. In the fall, meadow pasture is the best. Pumpkins are first rate feed; they make butter of excellent flavor. Green corn fed to milk cows in the fall is valuable feed, and is especially profitable in dry seasons when pastures fail. It increases the quantity of milk and butter, and makes of the latter an excellent article. Cut and feed when the corn is in its milky state, they will eat it stalks, blades, and all.

Now is the proper time to sow corn for feeding green, and we think every dairyman will find it advantageous to do so.

On Cheese Making.

Eds. Co. Gent.—After twenty-five years' experience in the business of the dairy, we having always kept from twenty to twenty-five cows, I think I can give a very good receipt for new beginners.

For ten pails of milk, as soon as milked, while warm put in the rennet, according to the strength, enough to set it. If it does not set in fifteen minutes, add a little more. When the curd has set, take a long wooden knife and cut through the curd, both ways, carefully. Let it stand about five minutes, then stir with the hand carefully. Place the strainer over the tub, and dip off the whey. Now dip in pans, and set in a cool place over night.

In the morning run up your curd in the same way, and after cutting, put in last night's curd after draining, and squeeze very carefully with the hand. Dip off one pail of whey, and heat scalding hot; if not scalded alike, heat more and stir continually. Then place a ladder over another tub with a strainer and basket, and dip the curd and whey into the strainer. Do not let it settle together. Then remove it back to the tub, and mix one pint of best salt. If sage is wished, three tablespoonfuls is a plenty if dried and sifted. Then put in the hoop, and it is ready for the press. Turn in four or five hours, and let it remain until the next morning; then grease with lard. If the cheese is large, bandage when spread enough. Keep the cheese room dark days, and raise the window nights.

If the lady of Michigan will try this receipt, we think she will have better success, if she takes good care of them for four weeks. Mrs. S. Johnson. *Schuyler Falls*, *N. Y.*

Remedy for Bugs on Vines.

I frequently see directions for preventing the depredations of *bugs*. A *very* simple remedy which I have tried for many years and successfully, is to place a shingle or bit of board by the hill of squashes; the bugs will resort to these for protection by night, and may be easily destroyed early in the morning. It is necessary to follow up the thing for two or three weeks. This is for the large dark colored bug. For the striped, I sprinkle plaster of Paris on the vines, when the dew is on them. In very warm days it is well to visit the squashes near the middle of the day, as the black bugs will resort to the shingle for protection from the heat. M. K.

I have had excellent success in raising squashes, cucumbers, and all other kinds of vegetables, and protecting them from bugs, without the use of boxes, glass, or gauze. Procure a barrel, and throw into it the excrements of cattle, with sufficient water to make a strong liquid, and give the vines a drenching with the mixture every morning. Keep the barrel replenished, for the longer it stands the better; and it will prove not only an effectual remedy against the bugs, but a superior stimulant. A Reader. *Willlow Valley R I.*

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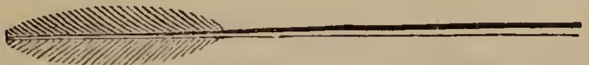
Hungarian Grass.—In regard to the Hungarian grass, I can say, though it may be German Millet, I find I can get two tons of hay per acre, as I did last year, from the poorest and lightest land I have on my farm. It suckers or stools more than the common millet, makes a finer and more nutritious hay, and a decidedly surer crop. Such is my experience. I got two bushels of seed from Iowa at heavy cost, and have sold seed at $3 per bushel—probably all sold ere this that I had to spare. I esteem the Hungarian grass as a valuable crop. E. Cornell. *Ithaca*, *N. Y.*

Cure for Gapes in Poultry.

MESSRS. LUTHER TUCKER & SON—In your reply to J. F. W., page 383 of the Country Gentleman of the 16th June, on his inquiry as to a cure for gapes in fowls, you say the most simple remedy is "to give half a tea-spoon of ground pepper to a grown hen, and vary the dose according to the age of the patient." This remedy, and all other medicines are utterly useless, as I have found from fifteen years experience, as they do not reach the disease of the gapes, it being a worm or worms in the windpipe, and the only way to cure chickens, goslins, or young turkeys—old hens and ducks never, from my experience, having the disease—is to remove the worms with a trimmed feather, (such as I have formerly described,) passed down the windpipe, and twisted round while you withdraw it.



Thus far this summer, out of a large quantity of young chickens, turkeys, and goslins, I have lost but a single goslin with the gapes, and that died before I had time to operate on it, but immediately after its death I passed the trimmed quill down its windpipe, and brought out eight or ten live gape-worms; so there could be no question as to the cause of the death of the goslin, which was as large as a full grown duck. CHALLES F. MORTON. *Mill Farm, Mortonville.*

How to Destroy Rats.

EDITORS CO. GENT.—I have noticed inquiries with regard to the best mode of destroying rats. Two years ago I was literally overrun with rats, and after trying all sorts of traps, and various other modes to rid myself of the nuisance, without any sensible effect, and after reflecting a little on the habits and instincts of the animal, I concluded to try strychnine.

I took a common-sized candle box, 12 by 18 inches, and bored a hole in each end with a two-inch augur. I then put in the box a quart of dry Indian meal, with which I mixed two ounces of strychnine, and placed the box in the hog-pen, "where they most did congregate," in one corner of the feed alley, and covered it up with a tight lid. In a short time the rats disappeared as if by magic; on several occasions I found them dead in the box; and when the meal was all gone, I prepared another dose, very little of which was used, for the reason there were no more rats to eat it; and I have scarcely seen a rat about the premises since. C. P. S. *Fort Plain, N. Y.*

Cheese Making.

MESSRS. EDITORS—Noticing an inquiry in the COUNTRY GENT. about cheese-making, and having had some years of experience in the business, and the good luck to never lose a pound, I give my practice.

I set the milk at 90 degrees, in spring and fall, and 86 in hot weather. Heat up three times—first 90 degrees, then 95 degrees, and last 100 degrees. I salt about one teacupful of salt to 16 pounds of curd. I use much care in breaking up and working the curd; cutting at first with a dairy knife of four blades, and using the knife with one hand during the whole operation, taking particular care not to squeeze the curd in any way, but pass one hand under, and lifting gently, and letting it fall off the hand and between the fingers, and with the other keep the knife in motion in the curd, cutting it as fine as possible by the time it is ready for salting.

Thought and care are essential in all the various operations. Intense interest and anxiety are necessary in order to do *all these things well*, for *they* influence the *texture, flavor, and quality of the cheese.*

RENNET.—The stomach of the calf should be taken when empty, (no curd in it)—care taken not to get dirt on it—and without rinsing or washing, and salted inside and out, with one teacupful of salt to a rennet, and placed in an earthern dish. It should lay in the salt two days, then be stretched upon a stick in the form of a hoop to dry. When dried, take it off the stick, and place it in a tight sack for use. Those prepared one season are not to be used till the next.

To soak the rennet, take an earthern vessel; put three in it; then take two gallons of water, put one quart of salt in it; boil and skim, and cool till milkwarm. Then pour it upon them, and in one week it will be fit for use. One teacupful of the liquor will curdle the milk of two milkings from fifteen cows, fit to break up in forty minutes. MISS S. G. *Herkimer Co., N. Y..*

Our correspondent will please accept our thanks for her prompt response to MRS. SHEDN, and we hope she will favor us with further contributions to our pages.

To Our Lady Readers.

"Domestic Economy" should be one of the best filled and in every way most valuable departments of a journal claiming to be devoted to the interests of our Rural Homes. Not that it should take the place of other departments of equal importance, but in its own sphere it should be what they also are, complete and reliable. We now appeal to our lady friends to help us in making this part of the present volume of the COUNTRY GENTLEMAN more valuable and perfect than it has yet been. Please send us short articles or recipes, embodying any useful fact or any really reliable information in regard to the numberless matters connected with any branch of rural and domestic economy with which you are acquainted. You will thus confer a favor upon us, and have the satisfaction of knowing that you may benefit others by what you write.

Cream Beer.

EDITORS COUNTRY GENTLEMAN—As the *warm weather* is *approaching*, we begin to think of refreshing drinks. I have a famed receipe which I give you. It is an effervescing drink, but far pleasanter than soda water, inasmuch as you do not have to drink for your life, in order to get *your money's worth*. The effervescence is much more slow.

Two ounces Tartaric Acid.
Two pounds white sugar.
The juice of half a lemon.
Three pints of water.

Boil together five minutes. When nearly cold, add the whites of three eggs well beaten, with half a cup of flour, and half an ounce of essence of wintergreen. Bottle, and keep in a cool place. Take two tablespoonfuls of this syrup for a tumbler of water, and add one-quarter of a teaspoonful of soda. L. E. R.

Preserving Fruit in Cans.

EDS. CO. GENT.—Some time since you were anxious to know my method of preserving fruit in cans. I intended to have informed you sooner, but entirely forgot it. I will give it to you to day:

To one pound of the fruit, I put a quarter of a pound of white loaf sugar. Put them over the fire together. Let them boil up once. Then have your cans in a pail of water as hot as possible without breaking them—have *them* also filled with water of the same temperature. Let them remain so for a few moments. Then, while the fruit and sugar are boiling hot, fill the cans while they are setting in the water. They must be filled to the very top. Then put the cover on, and seal with cement. After filling them, take them out of the pail of water and put them away to cool. After they are *cold*, turn them over on the cover side, and let them remain so until you wish to use them.

I have saved fruit in this way for three years; and have now strawberries and peaches that are as fresh as though they were picked this year, which are a year old.

I always use the glass cans, for I consider them more pure than any other kind. M. H. K. *Auburn.*

Drying Rhubarb.

Is pie-plant good dried, and is drying it much practiced? L. H. *Warner, N. H.*

Rhubarb is good when dried, and if not much practiced, it is not because the merits of it is unknown; for when prepared it will keep for a long period, and be almost as good and fresh as when used in a green state. The stalks should be gathered, pealed, and cut into pieces about an inch in length; these pieces can then be strung on a small twine and hung up; or they can be kept in tin dishes and plates around the stove, until they are perfectly dry. It shrinks very much in drying, more perhaps than any other plant—but loses none of its properties by the process, and it is as good for sauce or pies in winter, as that of any other dried fruit. When wanted for use it should be soaked in water over night, and then simmered over a slow fire. Rhubarb is a wholesome plant, and is becoming more generally used than formerly.

Recipe for Currant Wine.

Messrs. Editors of the Country Gentleman—I send the following receipt for making a good currant wine, in hopes thereby of promoting the domestic manufacture and use of a healthful beverage, free from the noxious ingredients which now almost universally enter into the composition of what is sold for and drank as imported wine. Those who are only acquainted with the old fashioned, thick, sweet, heavy currant wine, have no idea of the beautifully clear, light, delicate and aromatic beverage made of currants by the process now described.

The wine thus produced has the flavor of the lighter grape wines, and to my own taste. and that of many of my friends who have tried it, is preferable to the ordinary Sherry or Madeira. I have found that currant wines made apparently in precisely the same way, in different years, will exhibit differences of color and flavor, but still never coarse or disagreeable to the palate. It is probable that the process of manufacture is as readily affected by atmospheric changes, by slight differences in mechanical treatment, by the condition of the fruit, or the state of the season, as in the making of grape wine. I have not had myself sufficient experience to decide upon these points; nevertheless, by the rules now given, an article is made far superior to most of the wine sold in our shops, and you have, in addition, the satisfaction of drinking a wine that you know *personally* to be free from the admixture of whiskey, brandy or any fiery liquor, and that is not poisoned by the vile drugs of the distiller.

Receipt.—Pick the currants when fully ripe, and before they begin to dry on the bushes. Mash them with a pounder, in a clean wash tub, and strain out the juice through a bag of coarse open texture. For every quart of juice, add

2 quarts of water, and
2¼ lbs. of the *first* quality refined brown sugar.

I use what is called coffee crushed sugar. Put this mixture, after thoroughly dissolving the sugar, into a keg or cask, according to the quantity you have, and fill up to the brim, so that the liquid comes up even with the top of the bung hole; this is to admit of the flowing out of the cask by the bung hole, the scum and impurities thrown up to the surface during the process of fermentation. You must manage to have left over a little of the mixture, perhaps a quart will answer, for the purpose of filling up the vessel every three or four days, as it gradually loses in quantity by this process of ejection at the bung hole, and through evaporation. Water may be used if sufficient wine has not been saved, but the cask must be kept even full, except just before closing it. when there must be a space for air between the bung and the surface of the wine. Of course the bung hole must be kept open while the fermentation lasts. This may continue three or four weeks, according to the temperature of the weather, and the situation of your cask. I prefer a situation in the cellar, where, at the season of making, the mercury will range from fifty-five degrees to sixty-five degrees, and I let the fermentation continue about the period mentioned above. I close up the cask before the fermentation has *entirely* ceased, but after the most violent stages of it have passed by. This can be ascertained on examination, in part, by listening to the sound of the effervesence, and noting its gradually diminishing action and force. On closing, bung up tight until the February or March subsequent to the time of making, when you may draw out the wine and bottle it. It is well, when you place your cask for the reception of the wine, to tilt it up a little behind, so as to draw off the contents, as near as possible to the bottom, without disturbing the sediment, which, when stirred up and mixed with the wine. spoils its purity and flavor

I have found it to require at least two and a-half quarts of currants, as ordinarily picked from the bushes, with stems mixed in, to make one quart of expressed juice. Every four pounds of sugar, dissolved in the juice, will add about one quart to the quantity of liquid. If you wish your wine very sweet, add three pounds of sugar to every quart of juice.

I consider the following points of importance in securing a good wine. These are, first, the use of the very best refined brown sugar. I presume white sugar will answer as well, if not better, but I have never tried it; second, the removal of part of the impurities in the liquid, by the fermentation, in a full cask with an open bung hole, the aperture thus affording an escape over the side of the cask for the scum and froth; and third, the drawing off the wine without the slightest admixture of the sediment deposited at the bottom during the fermentation.

I have tried making wine both from grapes and currants, in large jugs, but have never succeeded, principally I judge from the difficulty of removing the wine without disturbing the murky deposit at the bottom of the jug.

I have no question but that excellent grape wine may be made on the above principles, excepting perhaps that much less water must be added to the grape juice.

A small machine for grinding currants and grapes, and expressing and straining the juice, and adapted to family use, and not for the wholesale market, which would require works on a larger scale, is a great desideratum. One was got up by a skillful mechanic in this place, last year, which answered a very good purpose, but to be effective as desirable. required further improvement. Whether it has received it or not, I have not heard.

Messrs. Editors, do you know of any such machine? In fine, I send you by express two bottles of currant wine, made according to the above receipt, in two different years, and you may thence judge of the value of both the wine, and the receipt for its manufacture. You will perceive that no mixture of ardent spirit of any sort is required to keep the wine good. H. L. Y. *Poughkeepsie*, *June* 30.

Rhubarb Wine.

I wish to inquire through the "Country Gentleman," how the juice of rhubarb may be extracted to make wine. L. E. R.

We find in the N. Y. Tribune a receipt for making "pie plant wine," as furnished by Mr. B. P. Cahoon, of Kenosha, Wis., the originator of the system.

The juice of the rhubarb is extracted by the same process that currant, elderberry, or any other juice, and mixing with the juice an equal quantity of water. To each gallon add three and a-half pounds of fair quality of New Orleans sugar. Put in barrels or casks, filled full, and fined with isinglass; being allowed to remain in the casks until spring, and then bottled. By adding or diminishing the quantity of sugar, it will vary the strength of the wine in the same proportion.

Rhubarb is said to afford a greater quantity of juice than any other plant, and it is also considered a better quality than any but grape juice to make domestic wine. The process is simple,and has this to recommend it; moreover, it is said by those who have tested the merits of rhubarb wine, that it is equal to American sherry.

Curing Green Beans for Winter Use.

Messrs. Editors—Noticing in The Cultivator of June, 1859, page 185, a recipe for "curing green corn for winter use," induced me to send you, for the benefit of yourselves and the numerous readers of your excellent journals, the following recipe for curing green beans for winter use, which, if used in connection with the corn recipe above alluded to, will afford a repast that in midwinter will be found highly nutritious, and will be eaten with great gusto.

The modus operandi is as follows: Pick good, tender sweet string beans, cut them into pieces about three-quarters of an inch in length, throw them into boiling water, let them stand five minutes; then, having the oven heated just hot enough to avoid burning the beans, spread on tin or earthen dishes, set them into the oven, and let them remain there till perfectly dry.; when they should be put up in small bags, and hung in a cool, dry place.

When you wish to cook a mess of corn and beans, put them to soak over night in warm water, and cook them as usual. I. T. Whitbeck. *Yaphank*, *L. I.*

Drop Cakes.

One quart of flour, 2 eggs, half a cup of butter, half a cup of sugar, one teaspoon of soda, two teapsoons of cream tartar. Stir butter and sugar together, add the eggs, put the cream tartar into the flour, dissolve the soda in a little milk, pour in milk enough to make as stiff as pound cake Put in the soda the last thing. Bake in cups or muffin rings set on a tin sheet. S. E. R.

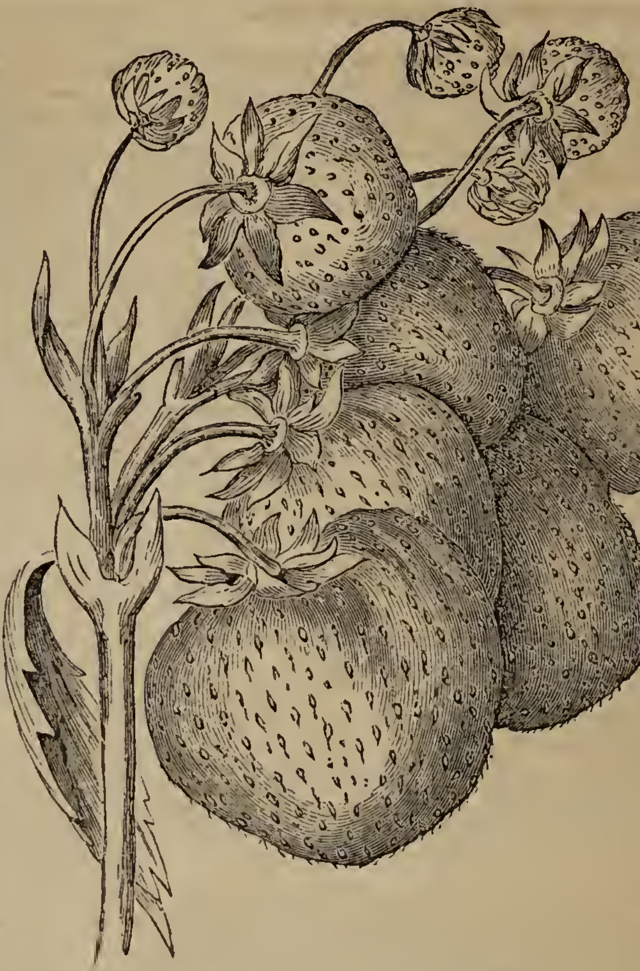
☞ Mr. E. Marks of Camillus, N. Y., has sold his fine yearling Short-Horn bull Felix, 2851, from Fanny, a superior milker, and sired by the first prize bull Echo of Oxford, (12821) 1500, to Timothy Brewster, Esq., of Adams, N. Y.

Wilson's Albany Strawberry.

This celebrated strawberry was originally grown from the seed by the late James Wilson, of this city. It is extremely hardy, the plants early in spring presenting a deep, healthy green; and in all places wherever it has been tried, both in this State and other localities east and west, stands unrivaled for productiveness, size and firm, juicy flesh. At a late meeting of the New-York Farmer's Club, a committee of five presented a report upon the six best kinds of Strawberries, and *Wilson's Albany* was placed at the head of the list for "size. productiveness and firm, juicy flesh." It seems to be very generally considered the most prolific and profitable sort for market now grown.

The cut accompanying this article is an exact representation of a cluster of the Albany Seedling in its growing state; the size given being the result of careful and exact measurement of the fruit grown in the western part of this State, under ordinary cultivation.

We should have acknowledged in our last, a basket from Cashier Lovett, an amateur grower, filled with the finest specimens of the Wilson we have yet seen. Mr. L. has about twenty-five varieties of the strawberry growing side by side, all treated exactly alike, and no one who has seen his beds will doubt his assertion that the Wilson will produce three times the amount of fruit of any of the other varieties.



WILSON'S ALBANY SEEDLING.

N. Y. State Ag. College—Laying of Corner Stone.

The seventh day of July, 1859, will remain an honorable and eventful one in the annals of our State, and in the agricultural history of the community. The day will be remembered as the one in which the corner stone of the New-York State Agricultural College at Ovid was laid, in the presence of three to four thousand people.

At two o'clock P. M., the officers of the Institution were escorted from the College Farm House to the site of the building now erecting, by the Geneva Cornet Band—where after a prayer by Rev. Mr. Hart of Ithaca, Col. B. P. Johnson, Secretary of the Board of Trustees, read a list of the contents of the box to be deposited under the corner stone, which consisted of a plate on which was this inscription: "New-York State Agricultural College, July 7, 1859. Corner Stone laid by John A. King, Chairman Board of Trustees. Chartered April 15, 1853,"—together with a list of the officers, trustees and builders of the college—a copy of the Bible—of N. Y. State, and American Institute Transactions—Norton's Elements of Agriculture—Agricultural papers of the State of New-York—daily papers of Albany and New-York—Dr. Sprague's Sermon on the Atlantic Telegraph—copy of Baron Von Humboldt's letter to Col. Johnson—Proceedings of Dedication of N. Y. State Agricultural Rooms, February 12, 1859—with Dr. Fitch's Reports, Col. Johnson's Report on the World's Fair of 1851, and a list of subscribers and donors to the College.

The President, Ex-Gov. King, then proceeded to lay the corner stone in its place, and as he struck it three times with a hammer, the band struck up an appropriate and lively air.

Ex-Gov. King then proceeded to deliver the address—in which he spoke in the highest terms of the originator of this great enterprise. the Hon. John Delafield, from whose personal exertions an act was passed by the Legislature in 1853, granting a charter for a State Agricultural College, to be located in the county of Seneca. Mr. Delafield was the first President of the Board of Trustees. In 1855, the citizens of Ovid raised the sum of $40,000 for the purchase of a farm, and the next year the State loaned the Institution the same sum for a space of 21 years, without interest.

The address was listened to with great interest, after which remarks were made by Col. B. P. Johnson, T. C. Peters, W. H. Bogart, M. R. Patrick, A. B. Conger, and J. B. Williams; after this, letters were read from Ex-Presidents Van Buren and Fillmore, and from Gov. Morgan and Ex. Lieut. Gov. Selden, stating that they could not be present. The exercises concluded with a prayer by Rev. Mr. Keller of Trumansburgh, Tompkins county.

The course of study at this Institution is to be thorough and practical, and it is intended to make the farm more of an experimental than a model one. It is thought the entire annual expense of each pupil will not exceed two hundred dollars.

The Wire Worm.—*Manure* is well known to good farmers, as one of the best remedies for the evils of the wire worm, to say nothing of its other good qualities; and some farmers adopt the following mode of applying it. The land for spring crops is plowed very late in autumn, the later the better, so that the cold may effectually chill them; and during winter manure is applied to the land, with three or four bushels of salt, and if practicable twenty or thirty bushels of ashes. The two latter may be applied early in spring; and if the manure is made into compost with turf, loam and sand, the previous autumn, with the salt and ashes added at that time, and the compost applied early the following spring, it will succeed well.

Foreign Editorial Correspondence.

Agricultural Education in Prussia.

From Letter V., Dated Munich, June 12, 1859, we give the following extracts:

The Prussian Agricultural Schools are, some of them, public, and others are private establishments, but all receive governmental support, and, as has been indicated, are generally under governmental control. In the place first there are *four* public Agricultural Academies, the purpose of which is to instruct *young farmers who have already a preparatory knowledge*, in the physical sciences, and their bearing upon Agriculture, and in Agriculture itself, with its associated branches of industry. They are each provided with a chemical laboratory, a library, collections of natural history and natural philosophy, and a building for the practical purposes of husbandry, in connection with a larger or smaller quantity of land. This land is intended not only to afford instruction, but also in time to yield a harvest of benefit from the experiments carried on upon it, with the aid, where necessary, of the laboratory, and including the culture of new plants and varieties, the results derived from different manures, the comparison of different methods in the culture of crops and in the feeding of stock—all conducted with the double object of advancing scientific truth and of improving actual practice.

The laboratory thus subserves an important purpose in the development of such experiments, while it is also essential for the chemical studies and analytical problems which form a part of the student's pursuits, and should therefore be located in a room adjoining the one occupied for chemical lectures. The other apparatus, particularly such instruments as the microscope, are also of use in conducting experiments, and solving the resultant inquiries, and both teachers and pupils have the use of the library, the collections, models, etc.

The oldest of the four institutions to which this general outline applies, is that at *Eldena*, in New Citerior Pomerania. It was established in 1834, upon an estate of the same name, belonging to the dotation of the University of Grieswald, as a branch of the university. Originally its main object was the instruction in this department of national economy, of young men destined in after life to serve as public officers, and its discipline still continues such as it is supposed will best answer this particular end.

As I understand the division of the 1650 Prussian acres,* composing this estate, 1200 are devoted to the practical agriculture of the farm, 314 are in meadow, 40 in pasture land, 19 in gardens and hops, 6 under water (for ponds), 17 in an experimental field, 2 or 3 in nursery, while the remaining 50 are rented. The soil is pretty fertile, and the ground quite even. A stock is kept of 25 horses, 21 oxen, 50 cows, 2 bulls, 20 young cattle, 884 sheep, and 71 swine. From 1,500 to 1,800 cwt. of malt, it is stated, are worked up annually in the great beer brewery; 350,000 bricks and tile for various purposes, and 300,000 draining tile are burnt in the kilns, and there is a small distillery—this last, however, merely for the instruction of the pupils. The faculty includes a Director, (now Mr. Baumstark) who also teaches in the economical and statistical branches; a teacher of agriculture, including the structure of vegetables, general farm management and account keeping, and the history of agriculture; a teacher of chemistry, physics, the structure of the soil and technology; and the administrator of the farm, who instructs in practical husbandry and in the associated arts, including particularly the care and breeding of sheep and cattle, the culture of meadows and of farm crops. There is also a teacher of botany, zoology and the physiology of plants; an assistant teacher in veterinary science, the physiology of animals and the breeding of horses; another in the cultivation and care of wood-lands; a third in architecture, a fourth in mathematics and surveying, and a fifth on law as connected with agriculture. The number of students here last winter was 54, and a boarding house was occupied by them in the village of Eldena.

The second of the academies occupies nearly 4,100 acres on a public domain called *Proskau*, and includes two estates, one bearing this name, and the other called *Schimnitz*, in Upper Silesia—having, out of the above area, 466 acres in meadow, 33 in pasture, 25 now designed for an experimental field, and about 20 in nurseries and gardens, while some parts are let to private persons. The necessary buildings were provided in 1851 and 1852. The soil is argillaceous, with some sand and lime, and is rendered wet by springs, to obviate which some attempts have been made at drainage. The climate suffers from the vicinage of mountains. The stock kept includes 2,600 sheep; 20 hogs; 27 cows and 138 other cattle, young and old; 51 horses and 9 foals. Brewing and distilling are not done largely, but brick-making is extensively carried on. The teachers include Mr. Heinrich, the Director, and others similar to those at Eldena, and are 10 in number. There are here 77 students.

Near Bonn is situated the academy of *Poppelsdorf*, the third on our list, and differing considerably from the other two, mainly in the smaller scale on which its farm-operations are conducted. The estate whose name it bears, belongs to the University of Bonn, and is leased to the Ministry of Agriculture,—under whose supervision lectures were commenced in the fall of 1847. The farm contains 126 acres, of which 17 are employed in experiments, a botanical garden and a vineyard. Its soil is of that most fertile and friable kind which characterizes the Valley of the Rhine, and it enjoys the climate of Southern Germany. Among its crops tobacco is cultivated, but the technical professions are not carried on, and the stock only numbers 25 cattle of all ages, and 3 horses, with apparently neither a sheep nor a hog. There are 70 students, and 6 teachers, including Mr. Hartstein, the director, together with four assistant teachers. The courses of study appear very similar to those already described. I notice however, that instruction is given in the care of silk-worms and bees, and in "hunting and fishery."

Two miles from Konigsberg, in the province of Prussia, there was opened in the fall of 1858, the fourth of the Agricultural Academies, which derives its name, like Proskau, from the public domain on which it is located—that of *Waldau*—a domain covering nearly 2,000 acres, including 430 of meadow, 335 of pasture, and 15 of garden-land. The pasture is swampy and difficult to drain; the meadow, although good, is not yet protected from the inundations of the Pregel, on which river it lies; the soil is generally clayey, and the climate that of Northern Europe. The stock number 60 horses, young and old, the same number of cattle, 700 sheep and 30 swine. Mr. Lettegast is Director, and with four other teachers and one assistant, during the sessions of the past winter (1858-9) has had nearly 50 students, instructing them with especial reference to the husdandry of northern Germany and the keeping of sheep.

There are moreover, two private Agricultural Academies, receiving State support, but of quite limited means—one at *Mogelin*, in the province of Brandenburg, under the direction of the son of the celebrated Thaer, and the other at *Regenwalde*, Pomerania, until the recent death of Dr. Sprengel, under his supervision.

Then come what are rather singularly, as it seems to me, termed "private" agricultural schools, because in the same sentence it is stated that they are "supported and controlled by government." It is, perhaps, universally a matter of belief on the continent that the goverment must be and do everything for the sake of the governed, (or for its own,) and it is worthy of one's constant observation to trace the continual differences wrought out even in the slightest things by a theory of State management so entirely the reverse of our own. While the temptation to diverge upon a subject on which so much might be said, is very strong, it may be better to withstand it for the present; the great problem of making both children and men behave themselves, educate themselves, earn their living, and worship their God, is one which has so long, often so angrily and always so diffusely been discussed, whether in civil life or in action on the field, that an American had better be shy of approaching it, unless the necessity that compels him and the time at his disposal are equally great.

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* The Prussian acre, I think, is very nearly equivalent to our own.

The purpose of the *private* schools referred to, is to exercise young peasants in the best ways of performing their labors, and to show them also WHY *one way is better than another*—to lead them to *think*. Consequently the instruction given must be adapted to the faculties of its recipients, while the number of them varies according to the extent of the estate and the views of the owner. The products of their labor go to the benefit of the farm, and the crops are either used in the institution, or disposed of towards its support. The conditions on which students are received vary widely, like the branches in which they must be taught, with the different localities where the establishments are situated; usually the State contracts with the proprietor for the instruction of the student, during even as long a period as ten years, and it also appoints one or more officials, as may be necessary, in the carrying on of the school.

Of these schools I will not copy the list; it includes no less than 18, generally with from 6 to 18 students each; and situated four in the province of Prussia, three each in Posen and the Rhenish province; two each in Brandenburg, Saxony and Westphalia, and one each in Pomerania and Silesia. One of those in Saxony, that at *Badersleben*, is in a district where the peasants are of a more wealthy class, and it has taken a character intermediate between the academies and the schools, having from 60 to 80 students, and over 1,300 acres of land. There is one in the Rhenish province which has 30 students, and another with 25. The aggregate of all these schools is over 300.

Baron Liebig's New Work.

[*Extract from Letter VIIth.*]

It may be thought that "deterioration" and "exhaustion," are becoming the burden now-a-days of too common prophesy, but we know that in many localities they are already the burden of inherited lamentation. I doubt if it can be preached too earnestly and repeated too frequently, that, as every barrel, even to the great tun of Heidelberg, has a certain capacity, and as, however great this capacity may be, it never reaches a point at which its contents may not in time be entirely drawn off,—so no soil is so rich that constantly cropping it without any adequate addition to its resources, will not in the end exhaust its productive power, and leave the unhappy owner much in the condition of that famous amateur farmer, who killed his goose to get all her eggs at once.

Now Providence in its all-wise arrangement of mundane affairs, has expressly constituted many different kinds of life, that each in turn may support and be supported by the others. There is perhaps no single evidence of Design which science has so clearly shown and so beautifully expounded as this; of which so many illustrations are constantly occurring, and which so wonderfully proves that in the economy of Nature around us, the machinery is every where adjusted, wheel to wheel and cog to cog, with the exactitude we endeavor to obtain in a perfect chronometer, or rather with the undeviating precision that marks the clock-work of the skies and regulates the succession of sun, and planet, and satellite.

Thus it happens that if the product of a certain soil, instead of being suffered to remain upon it, is taken away to serve as the nourishment of animal life, we are permitted in turn to look to the latter as one chief source of materials, which, if placed again upon our fields, will exert there an agency more or less similar, according as the task is thoroughly performed, to that which might have spontaneously resulted if their vegetable growth had been allowed to remain and decompose on the spot where it germinated and by the use of means within the power of all, shall be enabled to anticipate not only an increase of productive power in our soil, but also to reap from it each season an abundant harvest. To elucidate a system of farming which will bring about this result, is the great object of all the practice our Agricultural journals are recording; and to follow in the footsteps of Practice, to explain the path in which she has trod, to place upon the basis of an unimpeachable theory the merely empirical lessons she can give—becomes the task of science—a task in which some of her devotees have been long at work, and although without having accomplished thus far as much as was at one time looked for, still, in all probability, with the full degree of success which its numerous difficulties and complications could admit.

Baron LIEBIG has just published a new book, and its key-note is this vital necessity of maintaining the supplies of plant-food which the soil has, in a form available for use. I do not know whether the views he so strongly advocates to the exclusion of all others, as to the danger of our exhausting our mineral or inorganic vegetable elements from the soil, before we shall exhaust its nitrogenous or organic ones will eventually be sustained in the length to which he carries them; indeed I have thought that soil, sub-soil and rock beneath, might, altogether, possess greater latent resources of this kind than he considers science to have shown. I have questioned whether it might not be the part of the fertilizer so to act—like the moss upon the tower, if the comparison is allowable—in bringing into condition for consumption by the future crop those mineral constitutents, the stock of which seems proportionably so immense, instead of itself to supply them directly. I have doubted if those who think the value of their manure gaged *directly* by its ammoniacal strength, instead of in the somewhat round-about way in which Liebig explains the fact (see page 211) can be so entirely in the wrong, as he would make them out.

This, however, does not detract from the value of these "Letters on Modern Agriculture," or the facts they bring to light, the thoughts they suggest, the distinctions they lay down, or the earnestness with which they press upon the view the importance of a better culture. In another letter, although time will scarcely at present permit, I should like to revert to their presentation of several subjects, some of them occurring incidentally in the discussion of other questions, and all worth placing in a strong light before the eyes of every farmer. Practical men are berated pretty roundly, it is true, for their sins of omission as well as commission, and here I think a critic acute enough might point out admissions in the course of the volume, that soften very considerably some of its hard words. The severe strictures upon most of the Agricultural literature of the day, though *partially*, perhaps, deserved everywhere, the author very properly limits to Germany—a fact which should be remembered in the reading.

None of my American papers, so far received, have any notice of this book, and I have been so long beyond the reach of the British Agricultural journals, that I do not know with what measure of favor or criticism they have greeted it. When in Munich, I had the pleasure of seeing its author, who seems as constantly, as he is devotedly, engaged in those scientific investigations, the fruits of which appear from time to time in his writings, while even the interest they possess scarcely contributes more to his popularity and success as a writer, than the lucid style and apt illustration with which they are uniformly presented. L. H. T.

The VIIIth Letter of this correspondence we give in full, believing it will be read with interest.

War and Music.

The steamers of last week will have given you the news of the battle of Solferino, while in the papers that reach you by the same vessel that carries this, you will have the official details which we now possess. It was evidently a most hotly contested struggle, in which the

Allies, while they have gained an unquestionably great victory, have paid for it a price correspondingly large. I can, however, imagine the enthusiasm which reigned in Paris, when the first exaggerated reports of the allied successes were received. It happened that I was there when the Emperor left the capital to place himself at the head of his forces; the Empress, as you already know, accompanied him to the railway; and the streets leading thither from the Tuilleries were crowded with spectators, upon roadway and sidewalk, and in the windows above them, and the number of hats that were waved in the air, and the voices that came from the owners of the hats, and the genuine feeling of sympathy and loyalty that was apparently manifested throughout, were quite striking to witness—indeed, an American who has long resided there, said to me afterwards that he had never seen demonstrations so open and sincere on the part of the French. They are not disposed, and I doubt if any people are, to give vent to their enthusiasm in quite so noisy a way as we do; I presume many of our politicians have been honored on the stump with cheers which would "carry" a great deal farther than the expressions—in comparison mild—which have greeted the master of so many millions, going to lead into hazardous conflict one of the grandest armies ever gathered and arrayed.

By the way, what an opportunity is afforded to the Peace Society to issue tracts upon such a conflict! We shudder from head to foot when we read of some Norwalk catastrophe on the railroad, hurrying into eternity its score or two of travellers; but who pauses to count the agonies and consider the far vaster terrors of the battle field, when men, who are our brothers in humanity, if not in either race or nation, are by hundreds and thousands coolly summarized upon a tablet of "killed, wounded and missing," without a thought upon the fate of each unit in the awful whole, or of those links so suddenly severed, which once bound that unit to parents, children, friends, a home and a native place—any more than one would stop to waste the sympathies of the heart upon the contortions and death-struggle of "the poor worm we tread upon."

But I did not propose to furnish such a tract myself, and fortunately have a pleasanter subject to speak of. In the midst of twenty-five or thirty thousand other individuals, I enjoyed a small quota of the last day's Handel Festival Music, at the Sydenham Crystal Palace. Uncertainty about being able to go prevented my taking a reserved seat, and, in fact, I could not finally reach the grand scene until the first part of the programme was already concluded. The crowd itself was not only a surprising thing to see, but I doubt very much if such a number of people could have been found in any other part of the world, or near any other city than London, to pay for the hearing of so few hours' music, from $1.25, the lowest price, up to $5 or $10 for the choicest places. The affair, as you will have seen by the published statements, proved pecuniarily as well as musically a "great success." At the rear of so many eager ears, drinking in with all their power the sweet notes that reverberated from the orchestra in the transept,—my particular ear away in the nave, could receive but a small rill out of the great river of sound. They were performing the "Israel in Egypt,"—famous for its choruses—and now and then one of them would call into exertion all the 4,000 pair of lungs and arms that were at work together under the magic direction of the quick-moving and most energetic *baton* of Dr. Costa, who, with every motion of it, up and down, or right and left, appeared to sway the grand combination of instrument and voice in perfect time and tune,—and in such a chorus, the melody was not wholly lost in making its way through the aisles and galleries of this immense glass building.

Suffolk Agricultural Show.

Before the subject is old enough to have lost its freshness I want to say a word or two about the 28th Meeting, just held, of the "Agricultural Association" of Suffolk. It occupied only one day, Friday, July 1st, and took place at Christ Church Park, a finely shaded and otherwise beautiful site for such a purpose, near Ipswich.

A catalogue was for sale at the opening of the Show, including all the animals, but not the machinery on the ground. The main feature, perhaps, was the great display of Suffolk horses. I do not know whether we have ever imported any animals of this breed. Here in Suffolk it is thought to be scarcely paralleled for its power, activity and endurance. The color is an almost uniform and attractive chestnut. The height is from fifteen to seventeen hands. The weight attained is sometimes pretty large—two cart horses which I saw at the extensive Agricultural works of Messrs. Ransomes & Sims, having turned the scale respectively at 1,750 and 1,850 pounds. Whether this was considered an unusual thing for the breed, I did not understand. A number of them on the Show grounds were most powerful in frame, possessing great and compact muscular development, and at the same time clean and fine in the legs. In the class of "Agricultural Horses and Colts," there were shown no less than 134, of which the great majority were of this description; and, for agricultural purposes, their activity and strength renders them very superior, just as the excessive weight and still greater strength of the Lincolnshire horses make them the best for the heavy London drays. Some of these Suffolks have a great deal of symmetry and style, and seem to be as perfect of their kind as a painter could represent them. Among other prominent exhibitors, a gentleman named Badham, of Essex, was one of the most successful—his horse, "Chester Emperor," taking a sweepstakes prize open to all England, of $150, for the best horse shown of any kind whatever, and the first prize of $50, with $25 additional to the breeder, as the best stallion for Agricultural purposes. The same exhibitor also took a number of others in the different divisions of this class of horses. Thomas Crisp, Esq., of Butley Abbey, showed his aged stallion "Marquis," two entire colts, respectively two and three years old, an aged mare, and a foal, several of which are mentioned in the prize list. Of Mr. Crisp's stock, as well as his farming, which is conducted on a very extensive scale, I shall have more to say hereafter.

There were 107 horses shown for "Riding and Coaching." Four or five thorough-bred stallions, several of them shown by Capt. Barlow, were on this list, and both among them and in the rest of the catalogue there was much to be admired, and while I believe that this part of the show compared favorably throughout with the usual exhibitions of the country, it was better in horses for riding and hunting than in those for the coach, which were not largely represented, and moreover no premium for Matched horses, of any kind, appears on the list. A handsome brown Welsh pony was shown by Mr. Crisp, taking the prize from five competitors.

First on the cattle list come the Suffolks, a breed about as uniformly red as the Devons are, but red of a somewhat different hue, and in all other respects about as unlike them as possible. They have no horns, and an odd way of carrying their heads. But their skins are soft, and their forms not without compactness and a fair quantity of meat that is said to make really first-rate beef. Their great point, however, is their milk. I was told that it had long been the way with the breeders to save every calf out of a really fine milking cow, no matter what other qualities of good or bad it might possess. This has resulted in a degree of excellence as milkers, which the Suffolk farmers consider higher than that of Ayrshire stock. A gentleman informed me, for example, that he had lately sold a Suffolk cow, which made 15 pounds of butter during the week before she left him, and he since learned from the purchaser that during the week first after she came into his possession, she had exceeded this amount—making, I think, 15¾ pounds. He also spoke of a cow's having, to his knowledge, continued several years, I think four—to give milk constantly, never being dried off, even to the very day of calving.

Of the Suffolks there were shown eleven bulls, divided into two classes, respectively over and under two years old; fourteen cows and fifteen heifers. Mr. A. W. Crisp was quite a large and successful exhibitor.

The other cattle prizes offered were for similar classes as to age and sex "of any other breed, not Suffolk." The competitors were all Short-Horns, and while there were not many possessing any extraordinary merit, they were as a whole a nicish lot, to use an English adjective. Lady Pigot, of Chippenham Park, exhibited three heifers, all receiving first prizes, respectively three, two and one year old—the two latter (both roan) particularly pretty, and the first (white) reminding me of "Capt. Balco," even before I discovered from the catalogue that he was her sire. Mr. Thos. Crisp stood second to the above in all three heifer classes. The cows included several very good ones. Of the four bull prizes, three went to Mr. Crisp. The cattle list concludes with a class of Fat Oxen or Heifers, but there was nothing very remarkable in the eight that were exhibited.

Among the sheep there was also a breed "*now named*," says the catalogue, "the Suffolk," and one of the speakers at the dinner objected to such an application of the name, on the ground that he didn't think the sheep good enough to deserve it. The fault he chiefly found, was that they don't fatten well. But I am told they have one merit in a high degree—that of being *good mothers*—giving an abundance of milk for their offspring,—and that, on this account, the ewes are in considerable request among those who raise large numbers of sheep for market. They cross a ram of some long-wooled and easily fattening breed upon these ewes, and the lambs early come to be of good size and fit for market. Thus, while the young "Suffolk" rams might fetch say three and a half or four dollars for the butcher, the females in the flock would bring perhaps six or seven for breeding in the way above described. Sheep of this kind have the head and legs still blacker than the South-Downs; they are hardy and prolific, and, as I have said, raise their lambs remarkably well. There were fifteen pens of them on exhibition.

Of South-Downs the show was quite a good one, numbering a dozen lots, and the twenty-three pens of Long-wooled sheep appeared to me to be generally very meritorious. In the former I have again to mention the name of Mr. Crisp as an exhibitor and prize-taker; a Mr. Sexton was also a large and successful contributor, taking both first and second prizes in the class of yearling rams, with two grandsons of Mr. Webb's "112."

Last come the Suffolk pigs, of which, as might be expected here in their native district, we saw as fine a display as could be wished. There were upwards of thirty lots, justifying fully I think that degree of partiality with which this breed has already been received among us. The first prize boar and the breeding sow which received the same honor, belonged to Mr. Crisp. I do not mention the names of several other gentlemen, who had exceedingly good specimens both in this and the previous departments, because they would be of little interest to most readers, while as I have already hinted, Mr. C.'s farm operations will form the subject of another letter, and it is as well that this one should show that he has stock capable of winning for him about a due proportion of prizes.

The premiums offered vary in amount from $50 down to $15 for horses; from $30 to $10 for Cattle, Sheep and Swine. I understood the receipts of the day to have been about $1,250. There were only three committees of judges, each of four members—one committee for the Agricultural Horses, the second for Riding and Coaching Horses, and the third for Cattle, Sheep and Swine, all in a lump. The judges were at work soon after seven in the morning, and when, at eleven o'clock the public were admitted, their work was done, and the Premium animals were all so marked. The price of admission was two shillings, (say 50 cents,) from 11 to 12 o'clock, after which hour it was only half this price. Soon after four the dinner was held at a hall in the town, and I suppose several hundred sat down to eat it and to listen to the speeches which followed. Soon after they sat down, neatly printed lists of the prizes awarded were ready for distribution—showing a promptitude in this respect which I wish we might imitate.

Steam Plow and Cultivator.

In a field near by, Fowler's steam plow was busily in operation. This consists in an engine combining the operation upon itself of the windlass required in moving the plow together with a means of changing its own position when desired. In operation it stands at one side of the field, and at the other there is what is called an "anchor," furnished with a windlass corresponding to that upon the engine. A wire rope passes around these two windlasses like an endless chain, drawing the plow first toward the anchor and then back toward the engine—anchor and engine both moving themselves along their respective sides of the field as fast as the ground between them is plowed. To avoid the necessity of turning the plow around at each end of its furrow, it is provided with two sets of shares facing in opposite directions, with their beams fastened together so that when one set of shares is in the ground, the other sticks up at about 45° in the air. By a simple contrivance the course of the plow is regulated, the plowman having a seat on it for the purpose. Four shares work at once, or three on lands too heavy for a larger number. Besides the engineer and plowman, there must be a man to attend to the anchor, and two boys to keep the chain out of the plow's way, moving it along the middle of the field as the work proceeds. This steam plow has taken the Royal Agricultural Society's Twenty-five hundred Dollar prize (1858,) the Highland Society's Thousand Dollar prize (1857,) and several smaller ones. Its cost I believe is £650 or about $3,250, a sum so large as to be quite frightful, although at the same time if the machine fully met the views of the farmers of England I imagine there are many whose capital is large enough to allow of this or even a still greater expenditure.

On the same land Smith's steam cultivator was also at work. This is an arrangement by which any Portable Steam Engine can go into the field, and by simply turning a windlass carry the cultivator across it in any desired direction. The price seems to me larger than necessary for the apparatus required; being rated, exclusive of the engine (8 horse power,) with which the farmer is supposed to be already supplied, at about $1,000. This, however, together with another $1,000, or $1,250 for the engine, is a considerable saving on Fowler's price—although the difference is possibly not quite so great as the figures represent which I have given. The windlass in Smith's machine consists of two rollers, one unwinding the wire rope as fast as the other winds it up. The rope extends *around the field*, having pulleys anchored at the corners, and wooden rollers here and there for it to run on. The cultivator is attached at one corner of the field, where the operation begins; one roller on the windlass, in winding up the chain set free from the other roller, draws the cultivator along the side until it reaches the end of the furrow, when it is swung around, still remaining attached as before; the *other roller* of the windlass begins to wind up by a very simple change of gearing, and so the implement is carried backwards and forwards till the whole is done. The manufacturers say that about forty sets of this machinery are now at work, "thirty of which were purchased by tenant farmers."

It strikes me that either or both of these machines are worth the trial with us—especially at the west. If not patented in the United States, as I presume they are not—they could doubtless be manufactured there remuneratively at lower prices, while any modifications shown to be requisite in experience could be applied, and might be protected very likely by patent. The system of pulling the plow by a rope, instead of having a locomotive engine to go over the field itself, seems to be the project likely to meet the most favor.

I have been dwelling so long on this subject that I will not speak at length of the rest of the exhibition.

McCormick's Reaper, manufactured by Burgess & Key, was at work. It has the patented arrangement to lay the grain in a swath, obviating the necessity of a raker—which was exhibited before a committee of our Society at Troy last year, and which has met with great success here. Messrs. RANSOMES & SIMS, GARRETTS, the HOWARDS and others, contributed to a fine show of implements and Farm Machinery of nearly every description. From a number of manufacturers at Ipswich there was a large display of portable steam engines.

Visit to the Residence of Mr. Bass.

Before going to Ipswich I spent a night at the residence of M. T. BASS, Esq., M. P., about twenty miles, I think, from London, on the St. Albans railway. It is a place only recently purchased by Mr. B., who has another home in Staffordshire, where he has all his life been largely engaged in farming, and where, at Burton-on-Trent, is brewed, in vast quantities, the ale labelled with the name of Bass & Co., and so well known both in America and many other distant parts of the world. The firm named has done a business of *nine hundred thousand pounds sterling* worth of ale in a single year, on which the impost or government tax amounted to £160,000 or thereabouts—being about $15,000 of our money for *each week the whole year round* The brewery is only in operation during the winter half year, where an enormous force of laborers is employed. Mr. B.'s farming operations are there conducted, too, in a thorough and extensive way; what would a farmer among us, say to a crop of fifty acres wheat in one field, *averaging throughout forty eight bushels per acre*?

The place I visited was purchased in bad condition, and Mr. B. is endeavoring to bring it into better. He has one of Fowler's Steam Plows at work for him,—to see which was indeed one main object of the trip. The soil is a light one, and easy to work. The engine had been plowing its eight acres a day, but when I saw it, it was pulling a scarifier. The country through which we passed though not generally rich, was with some exceptions in clean cultivation, and we saw wheat promising perhaps thirty bushels to the acre. The four-course rotation is the one generally followed here, roots for example one year ; barley sown with clover, the second ; clover the third, and lastly wheat. Sometimes by keeping the land two years in clover or grass, the course is extended to five years, and occasionally, with extra manuring, this is also done by adding another "white crop," as for instance oats for the fifth year. Turnips are not sown till July, but we saw some promising mangolds. Wheat is sown in October, and harvest comes on about the second week in July. They were haymaking when I visited the place. The ordinary price of farm labor was stated at about fourteen shillings (say $3 50) per week, from which it should be remembered that the laborer has all his own expenses to pay, such as house rent, &c., but a higher rate is paid during harvest. My host expressed the opinion that the general competence and comfort of the poorer classes of England was never at any former period in her history so great as at the present day.

The rent of the land in that vicinity is about twenty shillings, (say $5 per acre,) the landlord sometimes, if not generally, paying the tithes, which amount to several shillings. When the landlord drains the farm, the custom is generally to add to the rent 4 per cent. upon the cost of the operation, sometimes 5 per cent., but the landowner is willing to depend on the permanently increased value of the drained land for some of his return. Mr. BASS has drained very largely in Staffordshire. His experience leads him to prefer a depth of from four to four and a half feet, while the distance of the drains has varied with the nature of the soil from nine yards to twenty. Their average cost has been about $25 per acre, while some have cost as much as $27 50, in the latter case, the drains being nine yards apart.

The field on which we saw the scarifier at work had been plowed, was then receiving a second stirring, and would have the clod-crusher and roller each carried over it, by way of preparation for a crop of turnips. The previous crop being wheat, and the season of turnip-sowing being so late, in the interim the land had had quite a fallow.

Trees and Lawns.

Our drive carried us between some of the first I had seen of England's famous "green hedge-rows;" many were grown so high that the narrow lane between them was almost like an avenue. In front of the mansion there is one of those beautiful lawns so much the envy of our landscape gardeners,—the turf, near by, here and there studded with flower-beds,—and the whole distance beyond, as far as the eye could reach, converted by a good natural disposition of the trees into a fine example of the graceful park scenery which is considered so essential an ornament to an English country-house of any pretensions. While the tree may be out of place in the pasture, so far as the question of economy is concerned, any one who can afford to indulge in a luxury, would find it better I think, to pay more for a little wood at least immediately about the home, even if less were paid for the wall paper within it. For, amid all the varied beauties of Nature, I know of none so little worthy of of our too common neglect; none presenting a wider diversity in the forms of wayward grace they take; none that are more "their own reward" to him that cares for them, or a more striking example of that wonderful workmanship of Nature which they illustrate in so many ways,—than the trees of the lawn or park,—which grow not straight-laced and stern, like the trees of the thick forest, nor yet are held in bounds by any man,—but send forth leaf and bough to the morning sun or the cool breeze of night just as it listeth them most; and, whether their branches droop for rest on the warm bosom that gave them birth, or stretch boldly outward and upward, or seem, as one looks from a little distance at their odd freaks of contortion, to be toying with one another as animals will twine themselves together at play,—with all the interest that circles them about, the trees are surely too nearly allied to us, and should be too dear to every eye and heart, to be ruthlessly cut down and cast away. It is to be wished that something of the English love of having them about our houses, and of the universal continental custom of planting them along our public roads, might be transported across the Atlantic. L. H. T. *London, July* 6.

Three Good Cows.

MESSRS. EDITORS—I notice in the COUNTRY GENTLEMAN of the 9th June, vol. 13, no. 23, p. 365, a statement made of a cow called the Ingall's cow, which some of my neighbors with myself seem to think very large, which causes me to make a statement of a trial that I had with three of my cows, commencing 30th of May 1859, for seven days, feeding nothing but grass.

One was a heifer, 4 years old—7 days, gave 274½ lbs. of milk, which made 13½ lbs. of butter.

The second was an older cow—gave 240 lbs. of milk, which made 14 lbs. 2 oz. of butter.

The third gave 279½ lbs. of milk, which made 14 lbs. of butter.

I have kept a dairy eighteen years, and have good cows, but never saw such a cow as the Ingall's cow. My cows are of a native breed mostly, but the best of them are a cross of the Durham. I like the Durham cross the best of any ; it gives size and flesh, and they are easy to keep. IRA BROWN. *South Rutland, Jefferson Co., N. Y.*

Buckwheat for Milch Cows.

An Orange county dairyman, S. C. Roe, feeds largely of buckwheat, without grinding. The grain is boiled with the hulls on, and when thoroughly soaked, put into the feed box, at the rate of two quarts to each cow. He adds two quarts of dry meal, which the heat and steam of the buckwheat cooks—this is sprinkled over cut hay, morning and evening, as the daily feed of the cow. He thinks half clover hay, well made, is better with grain, than twice the quantity of timothy with the same grain.

The Thousand-Legged Worm.

MESSRS. LUTHER TUCKER & SON—Enclosed please find a sample of a small worm that has taken possession of my garden for the last three years, almost totally destroying everything of vegetable kind. In the winter season they disappear or go deep in the ground, and early in the spring commence on the winter roots, &c., and devour them until the young vegetables commence to grow, when they attack them and completely destroy all but some of the most hardy, which seldom get to perfection. The large strawberry, when near ripe, will often contain as much as fifty of them. They will make a small hole to enter, and devour the heart from the fruit, and so long as there is room for a worm they will go in. The young cucumber, radish, beans, onions, &c, all fall a prey to them. I call them wire worm, but not knowing them, I am uncertain whether correct or not; and as there are no others in the vicinity, I would like to know what they are, or if anything can be got to destroy them. I have tried lime, ashes, &c., but without success. The only way I can find to destroy them is, when the weather is warm, lay boards round the walks in the evening, when early in the morning they will be under the boards by *thousands*—then I apply boiling water.

Please say in THE CULTIVATOR, if there is any known name for them, and anything that will destroy them. JAMES ADAMS *Armstrong Co, Pa.*

Answer to the above by Dr. Fitch.

MESSRS. TUCKER & SON—The worms from Mr. ADAMS, are a centipede or "thousand-legged worm," pertaining to the genus *Julus*, in the *Apterous* or wingless order of insects. Unlike the great mass of insects, these undergo no transformations, but always remain in the worm-like shape in which they hatch from the eggs. And whether these specimens are the young of one of our larger species, or a minute species now in its mature state, I am unable to say, having never yet carefully investigated the group.

One of the latest and best authorities respecting them says, "*ces sont des animaux inoffensifs*"—these are harmless animals. They are most fond of dark, damp situations; hence Mr. Adams finds them congregated under boards lying on the ground. Scarcely a bucket of water has been drawn from my well, this present season, that did not have one or two of these worms in it. Crawling from their retreats in the crevices of the stones of the well, they lose their foothold and drop into the water, the coldness of which renders them torpid and unable to crawl out. I must procure a trout and place it in my well to keep the water cleansed of these worms. Though should one of them chance to be swallowed in drinking, I doubt not the gastric juice would destroy and digest it. This, however, is an experiment in dietetics which I do not care about trying.

As to the food of these worms, it is no doubt vegetable substances which are in a diseased and decaying state. It is in old rotten logs in the woods that we always meet with our largest species named *Julus americanus* by Beauvois, and *marginatus* by Say, which is three and a half inches long, and over a quarter of an inch thick, of a lurid, grayish, olive color, with a red ring to each segment of its body, and usually just one hundred pairs of feet. And these small centipedes in our gardens and yards appear to be most numerous where decaying vegetable substances abound. Where a radish has been bored by the larva of the radish fly, where a cabbage root is clumpy or otherwise diseased, I have noticed these worms crowded together upon the affected spot, evidently to feed on the particles of semi-putrid matter they there find, and very probably promoting and extending the disease by removing this decaying matter, and thus exposing a fresh surface to the action of the atmosphere. And I presume the strawberries, cucumbers, &c., mentioned by Mr. Adams, were in the first instance wounded by ants or other insects, and were thereby rendered attractive to these centipedes. Several years since, a physician of this town, now deceased, from finding these worms very numerous in decaying potatoes, and unaware that they occurred abundantly on all other decaying roots, at once jumped to the conclusion that they were the veritable cause of the potato disease, and in the excitement at that time prevailing, his communications to the press on this subject attracted a somewhat wide notice. But everything known of these worms, impresses me with the belief that they never attack living, healthy vegetation, and consequently do not cause disease, though they may aggravate and extend it where it is already commenced. ASA FITCH. *Salem, N. Y.*

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Questions about Manure.

EDITORS CO. GENTLEMAN—In perusing the columns of your valuable paper for the past two years, I have continually found much to interest and instruct. Still there is one point which I have not seen elucidated to my satisfaction. It is one relative to that long and often mooted subject, manure.

The country is flooded with advertisements of the various concentrated manures of the day, each claiming the precedure; and we often find practical farmers who declare, as their experience, that there is nothing after all like barnyard manure for giving a permanent "heart" to the soil. Now the subject, of which the free discussion might afford much satisfaction to others as well as myself, may be best comprehended by the following series of questions:

1st. How does manure produce the effect which we observe to arise from its proper application? The results of drawing thirty or forty cart-loads of manure upon an acre of land are very obvious to the most casual observer; but the manner in which this effect is produced is not so evident.

2d. Whence does the plant derive its carbon?

3d. Does it absorb *any* carbon from the soil?

4th. In fact, does it derive anything from the soil, except moisture and soluble salts?

5th. Does manure do anything more than to furnish these soluble salts for the plant? If so, what is it?

6th. If not, could not the same quantity of salts taken from the land by a crop, be added to it in a contrated form, and thus restore and maintain its original fertility?

7th. Does nature furnish *any* direct agency for the promotion of vegetable growth, aside from the salts furnished by the manure?

8th. Agricultural writers lay great stress upon ammonia as a manurial agent. In what consists its peculiar excellence?

9th. Where is the proper place for manure—deep, medium, or surface, and why? J. B. C. *South Pekin, Niagara Co, N. Y.*

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SEED CORN—TWO EARS ON A STALK.—O. M. Culver says in the *Prairie Farmer*, that selecting seed corn for a number of years from stalks bearing two or more ears, will change the habit of the corn so that it will generally bear two ears on a stalk, but the grain on the cob will not be so deep, and the proportion of cobs to shelled corn will be increased. Some think that by increasing the number of ears on a stalk, by their growing smaller and shallower grained, they will ripen earlier; but he thinks that is doubtful. The little pop corn has very small ears, but is a late kind—the Baden corn is very shallow-grained, but that too is among the latest in maturing. Will observing farmers gives us their observations on these points?

Inquiries and Answers.

Mould and River-Mud.—My farm borders on a small creek, emptying into the Ohio close by. The timber is very heavy and thick along the creek banks. The consequence is, a very heavy annual coating of fallen leaves. There is also annually a heavy coating of weeds and undergrowth. Superadded to these, the back water from the Ohio is over the narrow strips of bottom along the creek, at least one-third of the year. There is consequently in these narrow strips, a bed of decayed vegetable matter, consisting of leaves, weeds, water grasses, &c., mixed with the alluvial deposit from the Ohio, of many feet in thickness. Would this be valuable as a manure; and if so, what would be the best mode to apply it? It is quite handy to my fields. Subscriber. *Meade Co., Ky.* [Vegetable matter, like that described, is a valuable fertilizer on soils which contain too little—but if the adjoining fields already have an abundance, it will not pay to apply it. The same remark may be made of river mud. These materials might be used to great advantage in successive layers with manure for compost. If the soil needs them, the compost would be doubly valuable; if not, they would be useful only in retaining the manure. Compost heaps should be made as near as possible to the place of spreading, to save cartage.]

A Crab with Maple Leaves.—Enclosed I send you the leaf of a crab apple that very much resembles the maple, while the tree and the fruit are the regular crab of this country; a leaf of which is also enclosed to show you the difference. The fruit, however, is larger than the common crab, but in every other particular is a crab. The tree is now full of fruit, (crab apples with maple leaves) An old believer in wheat turning to chess, asks me to write to you to explain how a crab tree can have maple leaves, or how a maple tree can have crab apples, which he regards more improbable than for wheat to turn to cheat (or chess.) The thing is new to me, but, nevertheless, the tree is here, in an old field, among a lot of other crabs; the leaf, the ends of the limbs, and the large size of the fruit being almost the only difference that I can see, between it and other crabs, so common among us. I would like myself to hear your views on the subject, but am not myself a believer in wheat turning to chess (or cheat.) L. S. Gash. *Henderson Co, N. C.* [The leaves sent are those of the crab, and not of the maple, having the sweet taste of the former, and not the bitter maple taste. They differ from the common crab leaf in being larger and more distinctly lobed; the latter result often taking place when leaves are unusually large and thrifty, and resulting in the present instance probably from an unusually vigorous individual or variety, or rich soil, or both. Nothing is more common than for leaves under these influences to sport or vary in form. We have seen more difference than this in leaves on the same tree. To suppose this more improbable than that wheat would turn to chess, would be similar to the belief that it would be more improbable that a stunted, bony, round-bellied calf might have been a smooth sided fat one by good feeding, than that a young colt might have been changed to a Suffolk pig. The variation in the form and appearance of leaves is constantly occurring; but for a plant of the genus Triticum (wheat) to change to the distinct genus *Bromus* (chess) is simply impossible—it never occurred and never can.]

Toad-Flax.—Inclosed find two sections of one of the most deliciously stinking posies that ever graced the sidehill of old mother earth. I had supposed, after a ten years raid with true Highland grit, that I should find no more of them; but here they are. We do not know the name of them; if you do, proclaim it, and advise all farmers that have it to hoist their colors half mast and wear crape until they have made an end of it—I mean the weed. Uncle Ben. *New Haven Co, Ct.* P. S. If your would like to know my method of *cultivation*, I will tell you some time. [The plant is the toad-flax, (*Linaria vulgaris*,) a naturalized foreigner, said to have been first introduced from Wales to Philadelphia as a garden flower, and from this a most troublesome weed has spread over the United States. It grows in large patches by its creeping roots, and becomes hard to eradicate. The best way no doubt is to smother it to death, as with the Canada thistle, &c. We would like to receive a statement of the proposed "Method of Cultivation," if valuable.]

Transmutation.—I see much said in the Country Gentleman, about wheat turning to chess. I believe the general opinion here is that it does turn to chess, and I should be glad to learn why chess follows wheat more than other kinds of grain. Can Mr. Johnston tell us? Sixteen years ago this spring, I sowed 40 acres of oats in a field that had been cultivated in corn the previous season. I paid but little attention to it until it headed out, when I was surprised to see a field of chess, and nothing else. If there was a stalk of oats I could not find it, or have it found. I had about half of it cut for hay. The next season I had some of the same oat seed sown in an adjoining field, and raised a fine crop of oats and no chess. J. D. Hale. *Hale's Mills, Tennessee.* [Chess more frequently follows wheat than other grain, because it is more frequently sown with it. Our correspondent leaves us to infer that he supposes his sixteen acres of oats *all* turned to chess. We cannot, of course, entirely ignorant as we are of the state of the ground and the purity of the seed sown, undertake to decide why he had so fine a crop of chess, but we certainly should not attribute it to transmutation. We can, however, give an instance of supposed change, which quite equals this of our correspondent, related to us some years since, by a gentleman from Massachusetts He stated that wishing to raise a crop of barley, he requested a friend at Syracuse, to purchase the seed for him—that it came to him in the winter—was deposited in his barn, where it remained until spring, when it was sown on ground thoroughly prepared. It came up and grew finely, but when it came to head out, not so much as a single head of barley was to be found in the whole field—*every stalk had changed to oats*, of which he had a beautiful crop. To this statement the gentleman was willing to make oath Yet that it was erroneous, there cannot be a doubt. In all such matters it is much easier for man to be deceived, in one way or another, than for Nature to turn aside from the unchanging laws impressed upon her by her Creator.]

Cow Manure.—Will you or some of your contributors, be so kind as to answer the following: Of what value is cow manure, during the summer season, when their feed is pasturage exclusively? What is its value compared with the horse manure, when he is fed on corn and hay? Will it pay to gather it up from the streets and alleys, (when near the manure heap,) and compound it with other manures for gardens? a. l. w.

Raising Water.—I have a drain running through my chicken-yard about five feet below the surface. Is there any way that I can bring the water to the surface, so that the poultry can have fresh water at all times, without pumping? R. F. [If the head of water is higher than the surface of the ground where the chicken-yard is, it may be brought up in a lead tube by the pressure—if not, a reservoir must be made for the insertion of a pump.]

Wetherell's Horse Hoe.—(*C. Ten Brook*, Annapolis, Ind.) This implement is manufactured by L. Wetherell of Worcester, Mass., the inventor. We do not know the price—our correspondent can address the inventor.

Increasing Strawberries.—I have five hundred plants left out of the one thousand sent me last fall. They are looking fine, and are making runners very fast. I wish to know what way I shall proceed in order to get the most plants from them. Shall I cut them from the main plant as fast as they become rooted? I have been advised to let the first runner stand, and take the second one. A little information on the subject would much oblige P. L. D. *Janesville, Wis.* [Let them run and root undisturbed till fall, giving them as rich and mellow soil as possible. The rooted runners, when they become strong, will send out more runners.]

SNAP-DRAGON CATCHFLY.—What is the enclosed weed? I send the top half of it. It grows from 12 to 20 inches high. The dark colored spots or portions of the stem, are gummy, or sticky. Cattle eat it with avidity. It grows only on a portion of one field, and if it is dangerous, I wish to eradicate it. D. A. A. N. [This plant is the *Silene antirrhina*, which may be translated into *Snap Dragon Catchfly*, the only English name that it probably has. We are not aware that it has ever proved a troublesome weed.]

TIME TO CUT BUSHES.—In what month, or in what part of what month, must I cut alders if I would not have them sprout again? One of my neighbors tells me it may be done any time in April - another, that July is the only month when it can surely be done. Another thought I must cut them in the old of the moon in August, and a fourth recommends the latter part of June. BERKSHIRE. [Our own experience is that alders should be cut in August, when the greater part of the sap is in the body of the tree furnishing new growth. If cut then, we have found that they will be less likely to sprout up, than if cut at a season when the sap is in the roots]

DISEASE IN SHEEP.—We have a ewe which is shedding her skin, some like a snake. She commenced at the mouth, and thence gradually over the whole head, ears and all; down the neck, and along the back and sides, she has shed her skin, but not on her belly. Is there a definite cause to be given for this? Is it a disease or an accident? D. A. A. N. [We have no knowledge of this disease, and would call on our correspondents for information.]

MUSKRATS.—What is best way to stop muskrats from cutting off corn? Can any of your subscribers tell one? I have tried trapping and poisoning; but have not been able to stop them entirely. I. C. *Woodville, Pa.*

CABBAGE.—May I trouble you for a little information? I am losing my cauliflower and cabbage plants by the hundred. On examination I find collected about the roots, a nest of worms, like maggots, that feed on the juices of the plant until it dies. Is there any remedy for this evil, by which I can save the plants? Where do these maggots come from? From the eggs of a fly? If so, how and when are they deposited on the roots of the plant? Can any reason be given why these ravages are so much greater this year than usual? C. G. H.

WHEAT.—Please inform me through THE CULTIVATOR, where I can procure white Mediterranean wheat for seed, and at what price. H. K. *Wrightsville, Pa.* [We do not know where *white* Mediterranean wheat can be procured.]

PLASTER.—How much plaster for top-dressing grass or grain, should be sown to the acre? H. [Many of our best farmers have stated the beneficial results of plaster on grass, if put on to the amount of only one bushel to the acre; but the usual quantity is two to three bushels in this country. In England five are used in most instances.]

DEVON BULL.—What would be the price of a full blooded bull calf of the Devon Breed? H. [From fifty to one hundred and fifty dollars.]

◆

HAY FOR COWS IN SUMMER.—It is that hay may profitably be fed in small quantities to cows, in seasons affording flush pastures. It is well known that stock thrive less on the rapidly grown grasses of wet seasons, than on the comparatively scanty herbage of dryer weather. The excess of juices is no doubt the cause, and a slight daily feeding of hay acts as a correction of this evil.

Thinning Timber--Tarring Corn, &c.

To what distance would you advise thinning a very thick growth of young rock maple trees, either for a sap orchard or for timber? On page 399 of the Annual Register for 1857, you say, "to destroy ticks, drop on tincture of lobelia seeds, a few drops only." Shall I understand this to mean that a few drops *upon a sheep* will kill all the ticks upon it at the time? Would you open the wool and drop it along the back, or how? Is there any danger of its injuring the sheep?

How can a farrow cow's milk be prepared so that it will be suitable for young lambs?

Several years ago, in the Co. Gent., you said "to preserve seed corn from birds, soak the corn over night in soft soap a *little* thinned, and roll in plaster before planting." Is that a sure protection against *crows* or only other birds? L. H. *North Weare, N. H.*

Young forest trees, intended to grow for timber, should be thinned out as they advance in growth. When small, they will grow thicker than afterwards, and each successive thinning will furnish valuable timber for different purposes—first hoop-poles, then rails and rafters, and afterwards heavier materials. They should in general be four or five times as high as they are asunder, and this rule will apply to any of the several thinnings.

The tincture of lobelia must of course touch the ticks in order to destroy them. Tobacco is the most common remedy now for ticks—a strong decoction being made for this purpose.

We have never tried the soft-soap remedy for repeling birds from corn, but have always been perfectly successful with tar—by first heating and wetting the seed by dashing scalding water over it, allowing it to remain just long enough to heat the outside of the grain, and then pouring on warm tar at the rate of a pint to a half bushel. The tar immediately forms a thin varnish over every grain, and then the application of the dust of air-slacked lime, gives it a coat that no crow or other bird relishes.

We are unable to answer the question in relation to preparing milk for lambs, and would request some of our experienced correspondents to do so.

Trial of Mowers.

GUILDERLAND CENTER, Albany Co., July 7.

MESSRS. EDITORS.—A trial of Mowing Machines was held here to-day, and used on the said trial were the following Machines: Hallenbeck's, Hallenbeck's improved, Hubbard's, Empire, Wood's, Buckeye, Clute's, Mulley's M. & R. combined.

The undersigned were appointed a Committee on said trial of Machines, and after examining them, as well as the work done, we find ourselves unable to decide which is the best machine, but would respectfully say, that Hallenbeck's, Hallenbeck's improved, Hubbard's, Empire, Wood's and Buckeye, are all good machines, and done their work in a workmanlike manner.

We had no means of testing the draught of the different machines, but are pleased to say that the labor for the teams seemed to be easily performed by all the machines. In regard to side-draught, we think that Hubbard's and Clute's had the least; and as each machine has its own peculiar merits, and improvements are being made, from time to time, on these machines, the Committee feel confident in saying that they will meet the wants of the farmers in this section of country, and would therefore recommend them to the public generally.

S G. Waterman, A. Wetherwax, *Watervliet.*
Henry Sloan, Elijah Spawn, *Guilderland.*
P. V. W. Brooks, Joseph Hilton, *New Scotland.*
Elias Schermerhorn, Alfred Hungerford, *Berne.*
James Armsrtong, Charels Clute, *Knox.*

Letter from John Johnston.

NEAR GENEVA, 12th July, 1859.

MESSRS. EDITORS—I enclose you one ear of my Missouri wheat. You may be sure it is not one of the worst, yet I doubt not there are many thousands better, as I did not think of sending one until I was about leaving the field, and then took one of the best I saw on a hard knoll where I stood. Although it was in ear a week before the Mediterranean, yet the latter is as ripe as it now.

I shall have 32 acres of the Mediterranean cut to-night—began yesterday. Wheat has ripened very slowly this year. When it came into ear, I expected harvest ten days sooner. It has ripened more as it does in England and Scotland, than I have known it, with few exceptions, since I have been here. I think you will hear of some heavy wheat in Seneca county this season. Still we never come up to the weight per bushel that they do in Britain—63½ lbs. per bushel is as high as mine ever went when fairly measured, but I believe the Imperial bushel is a little larger than our Winchester bushel.

I think you will agree with me that the enclosed ear is a very plump fine one, although not a great many seeds on it—about 40 or a little over—I have seen far more some times, but the ears are very uniform, and it stands thick on the ground, has a very stiff straw, and will require and stand rich manuring and high culture.

We have had extreme hot weather for a few days—thermometer from 90 to 95 at 2 P. M. in the shade—and we are parched with drought. Late sown oats must be worthless; late sown barley, ditto.

I shall I think make a crop of barley. I won't talk about oats. The fact is we seldom make a good crop of wheat and oats the same season—I mean an extra crop of wheat. To make that, we need a dry summer. To make a good crop of oats we require considerable rain on our heavy soils.

The so-called Hessian fly has cut down considerable of my Missouri wheat; still it is full and plump, but will be troublesome to harvest clean. I shall lime the seed before sowing it, and hope it will escape next year. There is a little also in the Soules' wheat, yet it is a fine crop—the best I have had since 1855. The field, 28 acres, was highly manured with sheep and cattle manure. I never manured any so highly for wheat.

Yours truly, JOHN JOHNSTON.

Breaking Steers.

EDS. CO. GENT.—In riding out the other day, I noticed the attempts of a couple of young men who were trying to break a yoke of oxen to the plow. They were giving them their first lesson, and the oxen being young, they had rather a serious job of it. Part of the time both were trying to get in the furrow, and then on the unplowed land, and, in fact, in every place where they should not be. At the same time considerable loud talking was going on, and a great deal of whipping. The team was warm, worried, and almost exhausted, and, as a natural consequence, they could do nothing with them. This reminded me of an incident that happened a day or two previous. Our neighbor S. had purchased a fine pair of young cattle, that had never been plowed, and been worked but little. Having commenced his spring work, he sent a hired man down to try them at plowing, Patrick vowing he could work them if any one could. About two hours afterward S. went down to see how plowing was progressing. He found Pat and the steers on a full run, he managing to keep one ox in the furrow; this happened, however, to be the wrong one, for the nigh ox persisted in taking the place of the off one. He had plowed in the same furrow since he had started. S. thought this was rather slow work, so they tried to get the erroneous ideas out of the nigh ox's brain, but all to no purpose. He then got an old pair of lines, and a couple of headstalls, and put them on as though it had been a horse team. They soon worked as well as an old team, without the use of the whip. This, I think, would be an excellent mode to break young steers, for you can guide them in obedience to the word of command. After they have learned the meaning of whoh, back, and other terms incident to cattle driving, the reins may be taken of. In training colts or steers, all that is required is gentleness and firmness. E. A. K. *King's Ferry.*

The Rubbing Cure for Wens and Chronic Swellings.

When in our younger days our senior kept seven work horses, we had a good deal of observation and not a little experience of the effects of rubbing in the cure or removal of wens, tumors, swellings from kicks, strains, wrenches, &c.; and we have so many times seen its wonderful effects, that we believe there is nothing better—that can be applied to any indurate enlargement, where acute inflammation has subsided—than abundant *rubbing*. True, it costs *labor* to apply this sort of remedy, but this very much increases my faith in it; because remedies that are too cheap are not apt to be so much prized as dearer ones. The only little difficulty is, that "hard work" is requisite to success. In chronic swellings there is a deficiency of pure blood, ordinary natural circulation is obstructed or impeded, and foul matter, either from injured parts or active infection of disease, accumulates in larger or smaller masses. Now, if a wen or slow swelling be rubbed, the heat of it is increased by external friction and internal excitation, action. This increase of heat softens the induration, by causing a movement, and more or less interfusion of its fluid particles. By this means circulation is excited, and as whatever leads to arterial circulation leads equally to venous defruration, it follows, that as the arteries bring in new blood, and thus give new life and feeling to the part, the veins take away diseased, and refuse matter, whether the result of collision or infection. Thus the cure proceeds as the circulation is increased, and restored; the veins taking away an excess of black foul blood, and thus reducing the swelling in the degree that the circulation is accelerated, by rubbing; and when the circulation is completely restored, there is a cure. Thus does *rubbing* cure chronic swellings. J. W. C.

Stimulant for Breeding Cows.

In an old agricultural publication before me, mention is made of a medicine which it says will induce a cow to take bull. Its composition is half an ounce of Cardamons, (grains of paradise,) and from quarter to half an ounce of Cantharides, (Spanish flies) I should like to know your opinion of the efficacy of this recipe, and the propriety of giving such powerful medicine to that amount. If there are any other provocating prescriptions practised and approved by any of your readers, they would do me a favor by communicating the same through the columns of your journal. H. F. *Southampton, N. Y.*

We know nothing of the value or efficacy of this mixture. We should have no confidence in it. Four or five grains of Cantharides would probably be as great a quantity as would be safe at one dose; and the above mentioned amount we should regard as highly dangerous.

ELDER LEAVES NOT A PROTECTION FROM BUGS.—I put a lot of elder leaves around my cucumber vines one afternoon, and next morning found about as many striped bugs on them as I did on the cucumbers. H. F. GIFFORD.

Notes for the Month.

United States Agricultural Society.—This Society has decided to hold its Seventh Annual Fair at Chicago, Illinois, Sept. 12—17. The Quarterly Journal of the Society for July, contains the Premium List, together with rules and regulations.

Persons intending to exhibit must become annual members of the Society, and entries made on or before Sept. 12th. They are also requested to make verbal or written statements concerning their contributions, and if such are of interest, or contain any special information or value, they will be published. Premiums will be paid at the business office on the ground, during the last day, and silver plate of equal value, if preferred, will be given in place of a cash premium, with a suitable inscription. Sales will be made during the exhibition, under such regulation as the Superintendent may hereafter prescribe. The Cook County (Ill.) Hort. and Ag. Society will exhibit and compete for the premiums offered by the U. S. Ag. Society. Col. Horace Capron of Illinois has accepted the appointment of Superintendent.

Cattle Show at Greenbush.—The buildings on the Rensselaer County show grounds at Lansingburgh having been lost by fire, the society has resolved to hold its next fair at Greenbush, opposite Albany, September 13-16. They may anticipate a large attendance from their neighbors of Albany county.

"Hungarian Honey Blade Grass."—A friend has sent us an Ausgusta (Geo.) paper, in which we find a card from A. P. Beers, an agent for the sale of the "Hungarian Honey Blade grass seed," in which he says:

> "I have taken the trouble to ascertain whether the frequent attacks made upon it [the Honey Blade grass,] through the columns of the *Country Gentleman* were well founded. The result of my enquiries is, that its increasing popularity materially interfered with the *sales* of another species of seed, in which the *Country Gent.* is pecuniarily interested."

Mr. Beers is quite welcome to all he can make out of this falsehood, which seems to have been put in circulation to help off the "Honey Blade," which we believe has found but a poor sale. The Country Gentleman has no interest, pecuniary or otherwise, in the sale of any kind of seed whatever.

The White Grub—Salt.—A nurseryman informs us that he has nearly lost a block of fine young pears on quince, containing about 10,000, by the ravages of the white brown-headed grub, which fills the soil by thousands, and eats the bark from the quince roots up to the surface of the ground. Having observed, as he informed us, that Prof. Mapes recommended six bushels of salt per acre, as an efficient remedy, he has been experimenting with salt in a more decided manner. He placed thirty grubs in a flower-pot filled with salt, covering them with it They seemed quite satisfied, and burrowed down near the bottom. In order to determine whether there was any difference between dry salt and the solution in its effects upon them, he then caused water to trickle down through the mass; and that he might know that they had not been *drowned* instead of killed with salt, he left enough drainage from the bottom of the pot to prevent the brine from accumulating. This experiment was quite similar in its results to the other—the grubs seemed rather gratified with the attention shown them in drenching them with the saline solution.

Our friend would like to know some remedy that will enable him to destroy these myriads of grubs, which appear to exist all through an acre or two of soil down to a depth of six inches. Can any of our correspondents inform him what to do?

"Draining Lengthens the Season."—In proof of this, read the following statement by the editor of the *New-England Farmer:* "An acre or two of land which we thoroughly underdrained two years ago, laying the pipes down four feet below the surface, has been affected about as much as though the season had been lengthened three weeks, or the land had been south as far as New-Jersey."

Thirty-Eight Tons of Hay per Acre.—Italian rye grass, cut five times during the seasson, and watered after each cutting with ten thousand gallons of liquid manure, distributed through pipes by steam power, has produced this unprecedented amount of forage. A report of the Glassnevin Farm, Ireland, gives the time of cutting and product as follows:—1st, April 14, 6¾ tons, (of 2,240 lbs. each,)—2d, June 4, 9½ tons—3d, July 19, 7¾ tons—4th, 7½ tons—5th, Nov. 22, 6¾ tons—giving a total of 38¼ tons per acre.

Hay Caps.—We have received from the manufacturers, Chases & Fay of Boston, a sample hay coverer, previously noticed in our columns. It is four feet square, the edges of which are hemmed. In the center is placed a riveted pin eight or ten inches in length, which goes into the top of a cock of hay, and at each corner are pins about seven inches long, fastened to the ends of elastic strings, which can be put into the ground or the hay, and thus keep the cap securely in its place We do not know how farmers can get along without this indespensable article. See advertisement in this paper.

Trial of Mowers.—A voluntary trial of mowing machines took place at Sloansville, Schoharie county, N. Y., June 24; and the large attendance of farmers and those interested in improved agriculture and agricultural implements, gave conclusive evidence that they are awaking to the interest of improved machines for performing the larger and heavier work of farming operations. Among the machines exhibited, "Kirby's American," and "Wood's Improved," occupied a conspicuous place. These were respectively presented by D. M. Osborn, proprietor of the former, and Walter A. Wood, the gentlemanly manufacturer of the latter. The "Buckeye Machine" was exhibited by the manufacturer's agent, James Walker, of Schenectady, and fully sustained its previous reputation in this trial. Harvey Smith, agent of R. L. Howard, the manufacturer of "Ketchum's Mower," presented one of those machines, and its management was artistic and beautiful. The exhibitors of the several machines met and parted with the utmost good will and friendly feelings; and they, as well as the large number of spectatators, pronounced the trial successfull and satisfactory, so much so that twelve machines were sold upon the ground.

Trial of the Steam Plow.—The trial of a new steam plow recently took place near Philadelphia. It is the invention of Mr. Fawkes, of Lancaster. It is attached to an engine 18 feet long, 7 feet wide, and weighing 7 tons, with upright tubular boiler. The engine rests on an iron drum six feet in diameter and six feet long, inside of which is an axle extending from end to end. The plows are eight in number, and are adjusted so as to lift up when the machine is turning at the end of a furrow, being turned and backed with as much ease as a common carriage. The two fore wheels are iron drums 3½ feet in diameter and 15 inches face, to prevent the engine from sinking too deeply into the ground. The machine turned over eight furrows at a time, each a foot wide and of ample depth, going at a speed that showed it capable of plowing several acres per hour. The work was perfectly satisfactory to the committee and spectators.

Another Promising Seedling Strawberry.—Chancey Miller, of the Church Family of Shakers in Watervliet, presented us last week, a basket of strawberries, from a seedling raised by D. A. Buckingham, of the same family, with which we were so well pleased, and with his account of its productiveness, that we rode out to the Shakers to examine it. We found the plant a very vigorous grower, and fully equalling Wilson's

Albany in productiveness, while the berries were of a larger size and brighter color, but less solid, and not so acid as the Wilson. Should it, upon further trial in different localities, fulfill the anticipations excited by its present appearance, it cannot fail to be a valuable addition to the number of our really choice varieties. The plants, we believe, will not be for sale until after another year's trial.

Gratifying Memento.—The senior editor of the Country Gentleman presents his thanks to Dr. John R. Woods of Albemarle county, Virginia, for a very beautiful walking-stick, received last week, wrought by hand from the root and wood of the Cornus florida, cut at Monticello, near the last resting place of Jefferson.

Grapevines bearing Potato Balls.—H. Holmes of Stafford Springs, Conn., assures us that whenever he plants potatoes near his grapevines, the grapes are spoiled, and resemble potato balls. Several others, he states, have observed the same results. He wants to know if they mix. They cannot "mix," for there is not the slightest affinity between the grape and the potato—no dicotyledonous plants are more widely separated in their natures, and a cross between them would be as difficult as one between the owl and the whooping crane. If the grapes are "spoiled," it must have been in consequence of the vine losing its leaves, preventing the fruit from maturing, or some other stoppage of growth. We have known grapes to grow near potatoes in numberless instances, with no detriment whatever, except what might be expected from one plant interfering with the other, as always occurs when two occupy the same ground.

Statistics of Agriculture.—Figures are reliable, and although their results may sometimes startle, yet they are *facts*. By them we are able to judge, form opinions and decide, and in no way can such valuable and trustworthy information be gathered in regard to our Agricultural resources, as by actual statistics. We noticed recently the statistics of farm products in Ashtabula county, Ohio, which contains twenty-eight towns, and have carefully gone over the figures to obtain the averages per acre. They are: wheat, 10 1 7, bushels; rye, 10; barley, 10½ nearly; buckwheat, 12½; corn, 38½, and a fraction over; oats, 12½, and a little over. The average of hay is nearly one and a-half tons per acre.

Dogs and Bell Sheep.—An Indiana sheep farmer says, that a number of sheep wearing bells, in any flock, will keep away dogs—he would allow ten bell sheep to every hundred, or hundred and fifty. When sheep are alarmed, they run together in a compact body, in which act all the bells are rung at once, which frightens the dog, or makes him think some one is on his track—so he leaves without taking mutton.

Musquitt Grass.—We are indebted to J. H. Singleton of Waxahachie, Ellis county, Texas, for a paper of the seed of this grass. He states that it grows there all winter, and affords as good grazing as their wheat and barley, and he thinks will make a fine hay. He wishes to procure turnip seed, and will exchange for it any of the floral or vegetable productions of Texas. Will not some of our correspondents undertake the exchange?

American Farmer's Magazine.—In the June number of this work, Prof. J. A. Nash, who has been its editor and proprietor for some time, says in the course of a long article setting forth his reasons for the cause, "Exchanges will please direct no longer to the *Plow, Loom and Anvil*, or *American Farmers' Magazine*, as it will not be in our power to return the favor." We exceedingly regret this, as it has been a publication of ability and practical worth. The subscription list is transferred to the *American Agriculturist*, and Mr. Nash intimates that his pen may be recognized among the editorial contributions to that journal.

Changing Pastures.—Remember that it is of the greatest importance at this season, that your sheep should be often changed from one pasture to another. If you have but one pasture, it would be better to divide it, and keep your flock in one part a week, and then change them to the other. This would be vastly better for the sheep, and would keep them healthy and in excellent order.

The Roller on Corn Ground.—A writer in the *Prairie Farmer*, who used a roller for the first time the present season, is delighted with its effect on his corn ground. "Once rolling," he says, "puts the ground in better order than several times harrowing, for it crushes all the large lumps, so that when you come to mark, plow and hoe, the ground is level, and there are no lumps in the way."

Tan Bark for Potatoes.—This subject is brought before the farmers of England, by a communication in the *Mark Lane Express*. Mr. R. B. Bamford claims thirty-five years practice and experience in this matter; and has issued a pamphlet giving his method of using it, which is in brief the following: He does not cut his potatoes for setting, but sets them whole, and the largest he can select. The rows are thirty inches apart and the potatoes are put nine inches from each other in the row. The land is plowed only eight inches deep, treads the manure firmly in the furrows, puts in the tubers, and covers them in with tan refuse, nine inches deep, instead of earthing up. In this way he reports that in 1857, he raised 675 bushels of potatoes—not a rotten one among them—to the acre, with nothing but waste tan as a covering. This is of great importance, the tan refuse being of little or no value, and if it can be put to so important and advantageous a use as in this case, it should be widely known and practiced.

Good Fleeces of Sheep.—Mr. Norman Bottom of Shaftsbury, Vt., has one of the finest flocks of sheep to be found in the Green Mountain State. He has just sheared two hundred, the fleeces weighing from five to twelve pounds. He keeps the Merino breed, and I venture to say there cannot be found fleeces that average better or of finer quality. The secret of his success in the wool-growing department is, that he is careful in the selection of his sheep, and provides plenty for their subsistence. His farm in every respect is a model of order and convenience. G. W. *Williamstown, Mass.*

Gladding's Hay Elevator.—In regard to this fork for pitching hay by horse-power, as described and illustrated on page 249, present vol. Co. Gent., John Johnston of Geneva, N. Y., writes as follows: "I have seen Gladding's Hay Elevator, or rather Horse Pitch-fork, in operation, and believe it will prove a wonderful labor-saving machine, especially in large barns, or for making stacks. I believe wherever tried, it will be found profitable for this purpose."

Salt Under Barns Injurious to Pigs.—I had eight very nice pigs, of good size, and nearly nine weeks old, when they acquired a habit of crawling through the pen and roaming at large about the farm-buildings. Their attention seemed attracted to the ground under the barn—which had been built but four years. Most all day they would remain under the barn rooting in the salt ground, and it was with reluctance that they would come out to eat. They became sick, and I removed them to a close yard; but their bodies became lank and yellow. Four of them died, but the others after being sick a long while got better. I would warn farmers not to let their pigs run under barns, and root in the salt dirt contained there. C. Mather. *Hartford, Conn.*

Sowing Grain.—With your permission I will give you my way of sowing grain, which I think has some advantages over the ordinary way. I sow grain all one way—that is, walk across the field and cast my grain with my right hand—then moving my stake three or four paces, walk back and cast my grain with my left hand. This may not seem to be so easily done, but let any one take a bushel of grain, and go on to the barn floor and cast the grain with his left hand, and he will see that the thing is easily learned. I sow all my grain in this way, and generally get it on very even. Some of the advantages are as follows—the labor is not all performed with one hand. Grain can be sowed more even. It is desirable to sow grain with the wind. W. *Allegany Co., N. Y.*

Wilson's Albany Strawberry.—As we have just passed through, as I think, an extraordinarily good season for strawberries, I expected to hear from you some tall stories about this delicious fruit. Not having heard any as yet, I thought I would begin with my experience. In the spring of 1858, I purchased of Mr. Wm. Thorburn of you city, 50 plants of the Albany Wilson Seedling. I set them out in rather poorish sandy soil, and to my own shame gave the cultivation of the same sort, thereby losing either four or five plants. This season I have picked and measured one bushel or 32 quarts of of berries from them, and should think that at least three quarts more have been given away as samples, &c. The ground they occupied is 9 by 15 feet, measured with a tape line. At the same rate, an acre would yield 322 bushels and about 22 quarts. Albert Van Voast. *Pond Grove, Schenectady, July 12th.*

Refuse of Tanneries as Manure.—At a late meeting of the Farmer's Club of Little Falls, the subject of using the refuse of tanneries, hair, fleshings, lime, &c., for agricultural purposes was discussed, and one member said he had used hair on grain and grass with the most marked effect. He had spread it thinly and harrowed in with spring wheat, and produced the best crop he had ever raised, or seen in the neighborhood. Upon grass its effects had been very distinct and lasting. Applied upon the top of an unproductive dry ridge of land, it had produced a very luxuriant growth, and without any other application, the dark green complexion of the sward had scarcely abated since 1847. On corn its application had not been so successful. It might have been owing to the manner of applying.

Currant Wine.—We publish in another part of this paper, a most excellent recipe for making Currant Wine. The communication was accompanied by two bottles of wine made after this recipe—one in 1857, and the other in 1858. The wine has been tried by several good judges, all of whom concur in pronouncing it a very superior article, and far better, as well as more wholesome than the wines to be procured at the shops under the various foreign names attached to the compounds sold for grape wines.

Milking Young Cows.—A recent agricultural writer has said that young cows, the first year they give milk, may be made with careful milking and good keeping, to give milk almost any length of time deemed desirable; but that if allowed to dry up early in the fall, they will, if they have a calf at the same season, dry up at the same time each succeeding year, and nothing but extra feed will prevent it, and that but for a short time.

Chufa or Earth Almond.—This spring I took some pains to a procure a few Chufas or Earth Almonds—planted them in my garden, and took great pleasure in seeing them grow so finely, anticipating a valuable crop next fall. A few days ago a friend of mine wished me to examine his garden, and such a sight I never saw. Every inch of ground was filled with what he called "nut grass." I examined and compared both top and bottom with my Chufas, and found them to be one and the same thing. He has tried for the last three years with plow, hoe, fork, and rake, to clear the ground, but in vain, and has now given it up in despair. Should any of your readers wish for a sample of this pest, next fall I will gladly supply them free of charge. As for my own, the spade I hope has cleared my garden before it is too late. Henry F. Gifford. *Falmouth, Mass.*

Sorrel.—Sorrel hay should be cut the first of the season, and if you have any pieces of grass in which considerable sorrel is found, be sure and put your scythe into it at the first of your haying. There are several reasons for this: sorrel furnishes a great amount of seed, and if cut before it is perfectly ripe, the seed will be saved from the ground, and add value to the fodder. By cutting it early, its value is almost nearly doubled, and if properly cured, makes one of the best and most palatable fodders for sheep, of anything which your farm affords in the shape of hay. Do not neglect this until it is dead ripe, when the seed will be scattered on the ground, and the stalks make but poor food for stock.

Management of Oxen—Backing.—A scene often witnessed is described by a visitor at an Agricultural Fair. A trial of working oxen took place in which they drew well, but on attempting to back a heavy load, a sad want of training was manifest both in oxen and drivers. "Instead of the driver quietly giving them the word, the whip was generally applied without stint before the animals were prepared to answer the demand upon them, and in some cases even before the word was heard. What can a pair of oxen be expected to do, if at every second step, they are obliged to dodge a stroke of the lash applied about the head and face? Such management is entirely inconsistent with a strong, persistent effort, such as is required in the operation of backing a load."

Strawberries.—We have just got through with our strawberries, of which there is a great many raised in this county. There was as many as 90,000 half-pint baskets sent from Ramsey Station in one night, and the season lasts about 28 days. They were sent to New-York market, from whence they are sent to all parts, west, north and east, and sell for from one cent up to 3½ cents per basket. The kind we mostly grow are called the Scotch Runners and the Hautbois. J. T. *Ramsey, Bergen Co., N. J.*

The Milk Business.—Some idea may be formed of the extent of the milk business by the quantity which arrives in New-York daily through one channel. About 240 single and double wagons cross the Jersey City ferry every night for their supply of milk, which arrives principally by the New-York and Erie road. The wagons average 18 cans of 40 quarts each, making a total of 176,800 quarts. The freight upon milk on the N. Y. and Erie road amounts to about $1,000 per day.

Iowa Farmers' College.—We learn from the Muscatine Journal, that this institution has been located in Story county, thirty miles north of Des Moines city, and nine miles west of Nevada, the county seat of Story. The site is said to be one of the most beautiful to be found in the State. There are 640 acres of land purchased at a cost of $5,400.

St. Lawrence Co. Fair.—At the late annual meeting of the St. Lawrence Co. Ag. Society, Hon. Calvin T. Hulbard was elected President, and Geo. C. Bogue Treasurer, and L. E. B. Winslow, Secretary. The 28th, 29th and 30th of Sept. were fixed upon for holding the next Fair of the Society. L. E. B. W.

Wheat Crop in Western New-York.—The *Rural New-Yorker* says that wheat in the western part of the State will be harvested the present week, and adds: The result, thus far, has been most favorable, where the proper conditions were observed as to varieties, soil, and time of seeding—except in localities where the wheat was affected by the severe June frost. Indeed, during the past ten days *we have seen as fine fields of wheat in this county as were grown before the appearance of the midge.* Many of these bid fair to produce from thirty to forty bushels of first quality wheat to the acre. Among others, we examined several fields of Dayton wheat, the product of seed brought from Ohio last fall by Capt. R. Flinn of Le Roy. It is a very fine variety—a whtie bald wheat, with short, stiff straw, and if it acclimates as well as the Mediterranean, will prove invaluable in this region. Elisha Harmon, Esq., of Wheatland, has seventy acres of this variety, which we think will average at least thirty bushels to the acre. We are aware that "one swallow does not make a summer"—that the present season has been remarkably favorable for the growth and maturity of the wheat plant—yet, from information obtained last season and this, from observation and reliable cultivators, we are satisfied that the former great staple of this section of the Union, can still be successfully and profitably cultivated.

Thick and Thin Seeding.—Mr. Mechi and some others in England, have taken the ground that thin seeding is the best for rich and highly cultivated lands. This may be true of winter wheat if sown early, but it does not apply well to all spring-sown grains. Oats, for instance, should be sown most thickly on the richest and best cultivated land, as when sown thinly they are more liable to fall before the wind or heavy rains, in which case they produce little or no grain.

The Best Strawberries.—At a late meeting of the New-York Farmer's Club, the strawberry question was again introduced, and the following report of the committee appointed at a previous meeting to report the best six varieties, was read, and, after a long discussion, was adopted almost unanimously. The committee consisted of five, of which G. W. Huntsmen was chairman:

1. Wilson's Albany—Its primary good qualities are: productiveness, size, and firm, juicy flesh. It is, however, too *acid* for the taste of many.
2. Longworth's Prolific—Early, large, and of excellent flavor; only moderately productive; sometimes running too much to leaf.
3. Hooker's Seedling—Good size; of a rich, sweet flavor; moderately productive (some say very productive.)
4. McAvoy's Superior—Productive, large, and of excellent flavor; berries often defective in form.
5. Hovey's Seedling—This variety is too well known to need any description. Its only defect is dryness and want of high flavor.
6 Burr's New Pine—Of exquisite flavor; medium size; only moderately productive; plants want vigor and hardiness.

National and State Fairs for 1859.

United States Society.

Exhibition,	Chicago, Ill.,	September 12—17.

States.

Alabama,	Montgomery,	November 15—18.
Canada West,	Kingston,	September 27—30.
California,	Sacramento,	Sept'ber 27—Oct. 6.
Connecticut,	New Haven,	October 11—14.
Georgia,	Atlanta,	October 24—28.
Illinois,	Freeport,	September 5—9.
Indiana,	New-Albany,	September 26—30.
Iowa,	Oskaloosa,	September 27—30.
Kentucky,	Lexington,	September 13—17
Maine,	Augusta,	September 20—23.
Maryland,	Frederic City,	October 25—28.
Michigan,	Detroit,	October 4—7.
Missouri,	St. Louis,	Sept'ber 26—Oct. 1.
New Hampshire,	Dover,	October 5—7.
New-Jersey,	Elizabeth,	September 13—16.
New-York,	Albany,	October 4—7.
Nebraska Territory,	Nebraska City,	September 21—23.
Ohio,	Zanesville,	September 20—23.
Pennsylvania,	Philadelphia,	September 27—30.
South Carolina,	Columbia,	November 8—11.
Tennessee,	Nashville,	October 5—7.
Vermont,	Burlington,	September 13—16.
Wisconsin,	Milwaukie,	September 26—30.

Recipe for Elderberry Wine.

Messrs. Eds.—As the season for making Elderberry Wine is fast approaching, I would give, through your columns, an excellent recipe for making it.

The berries, when ripe, are first picked by the stems, then stript with the hand, or trimmed close with shears. Next they are mashed fine, which can be done by means of a stick in the form of a pestle. Let them remain until the next day, when the juice is pressed out slowly in a cheese press, or any other convenient way. Next boil the juices "twenty minutes;" skim it, and add four lbs. white sugar to a gallon. When milk warm, add a small piece of white bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Mrs. M. E. C.

P. S.—In the article on cheese making, page 19, instead of rock salt, it should have been "blown salt."—*Warner, N. H.*

Saving Seed Corn.

Good seed is as important to insure the farmer a crop, as good soil and thorough cultivation. Without the latter he cannot expect a large crop; and without the former he can expect to have none. The proper saving of good seed, therefore, is a matter of considerable importance, and at once becomes an object of attention and regard.

The frost, which was so severe in most parts of the country this season,—and which will be remembered as the "Great June Frost of '59,"—damaged the growing corn a great deal; but it is now starting up again, and if we have favorable weather during the present month and August, with two weeks of good weather in September, we shall yet have a crop of corn. With this prospect in view, a word on the proper mode of saving corn for seed may be in place.

We believe it is a general practice for farmers, when they are husking, to save out the best and largest ears for seed. This will do very well, but the better plan is, and one by which the corn will be forwarded several days earlier, to save it in the field. Our plan has been for several years, to go over the fields when the first ears begin to be glazed, and then gather those that look the most forward, and seem to be the best filled out. If they are not fully ripe, it will be just as good, by hanging the ears in a place where they will thoroughly dry; and many farmers have assured us of the superiority of the seed thus gathered. We would recommend this as the best method for farmers to save their seed corn.

It is also a good plan to save more than what is wanted for your own use in one year—for if the crop should fail to fully mature for seed, as it does some years—there would be a use for what you did not use the year before.

Speaking of corn:—an experienced and careful farmer once said to the writer, that it was his practice to plant the whole of the corn on an ear. We asked his explanation, and he said: "You know some farmers always shell off the corn from the tip end of the cob when planting, which they throw aside. I used to do so, but have learned better. When I followed that plan, my corn was not well filled, but every cob had a *snout* one or two inches long. Since I have planted all together, it is well filled out, and every ear is plump and full. I cannot explain it, but it *is so*."

Have any of our readers ever noticed this?

Deep Culture a Means of Warming the Soil.

A correspondent of the *Mark Lane Express* furnishes an able article upon this subject, from which we make the following extract:

"We all know that heat and moisture are the two elements of decomposition and rapid growth, as shown in tropical countries. Deep and loose cultivation tends to this result. Possibly the action of light may also be important. One cause of the rapid growth of market-garden vegetation, is depth of cultivation, combined with the subterranean heat of the decomposing manure; and wherever there is heat, moisture is attracted. The necessity for a more perfect cultivation is obvious; even on a fallow you may pick up small, hard knobs or clods, which on breaking into fragments, exhibit a little treasure of unexplored and unavailed of territory, confirming the great Jethro Tull's principle of infinitessimability in cultivation. I have great faith in the use of Croskill's clod-crusher in very dry weather, for the breaking of obstinate clods."

FEED MILLS of the Colman, Ross' Burr Stone, and other styles, for sale at Agricultural Depot 100 Murray-st., New-York. HENRY F DIBBLEE.

EVERY FARMER SHOULD OWN AND READ "PLAIN AND PLEASANT TALK ABOUT FRUIT, FLOWERS AND FARMING." IT GIVES VALUABLE INFORMATION ABOUT THE SUCCESSFUL CULTIVATION OF WHEAT, CORN, RYE, OATS, FRUITS AND FRUIT TREES, &C. THE PROPER MANAGEMENT OF CATTLE—A LIST OF CHOICE SEEDS, FRUITS AND FLOWERS. HOW TO TRANSPLANT AND PRUNE TREES AND VINES, GRAFTING, &C. FULL INFORMATION ABOUT BLIGHT AND INSECTS, &C., &C., &C.

"PLAIN AND PLEASANT TALK ABOUT FRUITS, FLOWERS AND FARMING," WRITTEN BY HENRY WARD BEECHER, WHO TO HIS ALREADY RENOWNED REPUTATION AS A PREACHER, ORATOR AND AUTHOR, MUST NOW BE ADDED THAT OF A PRACTICAL FARMER AND GARDENER—FOR SUCH HE IS AND HAS BEEN. 1 VOLUME, PRICE $1.25. FOR SALE BY ALL BOOKSELLERS AND AGENTS, OR SENT BY MAIL, POST-PAID, ON RECEIPT OF THE PRICE, BY

DERBY & JACKSON,
July 14—w&m1t. Publishers, New-York.

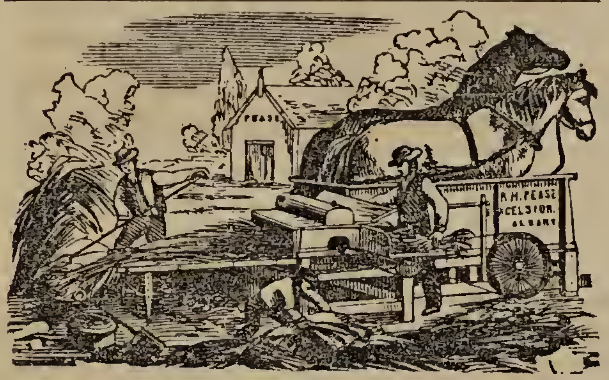
HORSE POWERS, Threshers, Saw-Mills, Fan-Mills' &c., for sale at Agricultural Depot, 100 Murray-st. New-York. HENRY F DIBBLEE.

PRINCE'S STRAWBERRY CATALOGUE.— The 44th Edition is now ready with Descriptions of 142 Select Varieties, and directions for culture. Applicants by mail enclosing 10 cents in stamps, will receive a copy. The New Catalogue of 150 varieties of Native Grapes, and Pæonies, both Tree and Herbaceous, Dahlias, &c., will soon be ready, and will be sent on the same terms.

WM. R. PRINCE & CO., Flushing,
July 21—w&m1t. New-York.

EXCELSIOR SEEDLING STRAWBERRY. The subscriber has a Strawberry he has been cultivating for several seasons, to which, from its many good qualities, he has concluded to give the above name. The plants are very strong growers, perfectly hardy, standing our winter's cold and summer's heat without any protection. Fruit very large, bright scarlet red, emitting a delightful aromatic odor, with a mild, delicious pine apple flavor; firm flesh, sufficiently so to bear transportation 500 miles to market—a good bearer, surpassing any other berry for profit I know of. I sold my crop of them this year readily for 25 cents per quart, at home. I have a few thousand plants I have concluded to offer for sale this fall, at a fair living price, say $3.00 per hundred, $20 per thousand, for cash with the order. Address

O. HEFFRON,
July 14—weow3tm1t. South Salem, Ross Co., Ohio.



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Two-Horse Power and Thresher, complete,	$160.00
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Cider Mill, (Krauser's Patent,)	40.00
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Albany, N. Y.,
Manufactrers and Dealers in all kinds of Implements and Machines. June2 —w8tm3t

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PERUVIAN GUANO, Government Brand and Weight; SUPERPHOSPHATE OF LIME and BONE DUST, for sale by

A. LONGETT,
Aug. 1—m2t No. 34 Cliff-street, New-York.

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A. F. MAYHER & CO.,

No. 54 Vesey-Street, New-York,

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Which is too well known to need any description from us. The Machine is WARRANTED to work well, or no sale.

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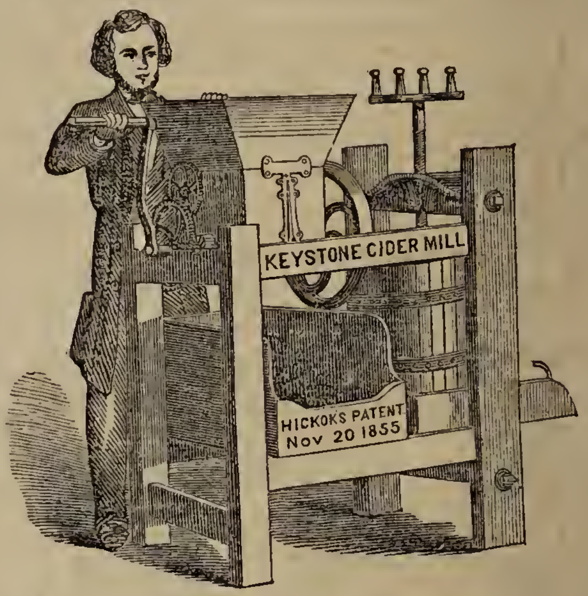
☞ *Send for Circular. Remember No. 54 Vesey-st.*

May26—w&m tf.



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It is made if possible better than ever, and where there are no agents farmers will do well to send to the manufactory early for a circular. We also make large iron press screws from 3 inch diameter and 4 feet long, to six inch diameter and 8 feet long, at reasonable prices. Address

W. O. HICKOK, Eagle Works,
July 21—w14m3t. Harrisburgh, Pa.

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March 10, 1859—w&m9ms

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HAY AND GRAIN PROTECTORS. The subscribers have for four years, by extensive correspondence, by practical observation, and by many experiments, endeavored to obtain information that would be a guide to the manufacture of the best *Hay and Grain Covers*, and we now offer the results of these investigations to the public. *We know* that our Protectors are the best ever offered to the community. As to the utility of the covers, we have the testimony of intelligent farmers in every part of our country.

Orders for samples or covers should be forwarded at once. CHASES & FAY,
May5—weow2tw8tm3t 233 State street, Boston, Mass.

GUANO!—The superiority of Phosphatic over Ammoniacal Fertilizers in restoring fertility to worn out lands, is now well understood. The subscribers call the attention of Farmers to the *Swan Island Guano*, which, for richness in *phosphates* and *organic* matter, and its *solubility*, is unsurpassed.

For sale at $30 per ton of 2000 lbs. A liberal discount will be made by the cargo.

Circulars, with directions for use, may be had on application at our office. FOSTER & STEPHENSON,
65 Beaver-st., New-York,
Agents for the "Atlantic and Pacific Guano Co."
June 26—w26tm6t

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address WM. LAWTON, New Rochelle, N. Y.

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BERKSHIRE PIGS.—I have now another choice lot for sale—$5 at 6 weeks.
Mar31—w6tm2t WM. J. PETTEE, Lakeville, Ct.

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HINTS TO HORSE KEEPERS: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forester.) Beautifully illustrated. Price $1.25.

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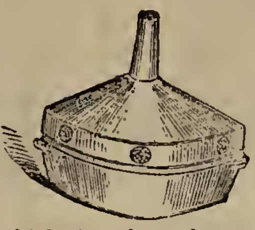
PRATT'S PATENT SELF-VENTILATING
COVERED MILK-PAN.



This is an enclosed milk pan, so arranged as to secure the supply and circulation of air required for the separation and rising of the cream. By reference to the engraving, it will be seen that the pan has a cover; around the lower rim of this cover are several minute perforations, for the air to enter, and at the top of the chimney, (as it may be called,) which rises from the centre of the cover, is another series of perforations for the air to escape. When new milk is placed in this pan, the colder external air presses in through the lower range of perforations in the cover, and forces the warm air out through the perforations above, thus producing the required circulation. This circulation of air will diminish, as the cooling process goes on, but not cease; for, gases being evolved in the production of cream, their lightness will still cause the air to draw in through the lower perforations, and so continue the process of ventilation.

The value of this new milk-pan will be at once apparent. Dairymen often have great difficulty in protecting their open pans from gnats, flies, rats, mice, snails, lizards, &c., &c.; and they cannot cover them, because, if the air is shut out, the cream will not separate from the milk.

But not alone to dairymen is the invention of value. In every family milk is used; and with one or more of these self-ventilating pans, the best condition for raising cream is secured. Covered, and set upon a shelf, or the cellar floor, the pan is entirely free from molestation. During the time that the patent was pending, in 1858, this Milk-pan was exhibited at the U. S. Agricultural Fair, held in Richmond, Va.; at the Pennsylvania State Fair, held at Pittsburgh; and at the New Hampshire State Fair, held at Dover. In each case DIPLOMAS were awarded.

ARTHUR, BURNHAM & GILROY,
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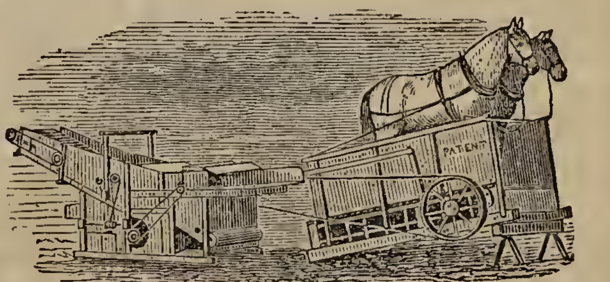

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The attention of the public is respectfully invited to the Machinery manufactured by us, consisting of Improved Endless Chain Horse Powers, for one, two, and three horses; Lever Powers for from four to eight horses; Combined Threshers and Winnowers, Threshers with Vibrating Separators, Clover Machines, Wood Saws, &c. Our machines have been long before the public, and have, almost without exception, given entire satisfaction to those who have used them.

We have lately improved the Vibrating Separator by making it in two parts, and driving it by a double crank, so that the parts move in opposite directions, and counterbalancing each other, so that the violent jerking made by use of a single crank, is avoided. These will be furnished only by special order, and at an increased cost over the other kind, when attached to the Thresher, of five dollars. We will send our circular containing price list and full descriptions of our machines, upon application; and will pay prompt attention to orders and correspondence.
G. WESTINGHOUSE & CO.,
June 30—w4tm3t. Schenectaday, N. Y.

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Agricultural Books,

Of all kinds, for sale at the Office of the Co. Gentleman

Annual Register for 1860.

The sixth number of this work is in press, and we wish now to say a word to our advertising friends. The num- of pages devoted to advertisements being somewhat limited, many applications have each year reached us too late for insertion, and it is on this account, as well as in order that the work may be completed as early as practicable, that those who wish for space in this department should send in their advertisements immediately. Prices as in previous numbers: One page, twenty dollars; one-half page, twelve dollars; one-third page, eight dollars; business cards from one to five dollars. Advertisements will be handsomely displayed, according to the room they are expected to occupy.

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List of Nurseries.

A Supplement to the List of Nurseries in the United States, published in the ILLUSTRATED ANNUAL REGISTER for 1859, will be given in that for 1860; and all nurserymen who may have received the list, are requested to forward immediately to J. J. THOMAS, *Union Springs, Cayuga Co., N Y.*, any important additions or alterations which may be required.

Nurserymen or others, who may know of any omissions, either of old or new nurseries, or discontinuances or changes, in that list, would confer an especial favor by furnishing immediately the desired information and corrections, with the estimated number of acres occupied by each, if known—which is to embrace the number of acres actually under growing nursery trees, and not the extent of land devoted to this purpose or intended to be occupied. Very small, imperfect or unimportant nurseries need not be included.

All who furnish valuable information will be supplied with a copy of the new Register.

BYRAM'S excellent Potato Digger—Pays for itself in digging four acres. For sale at Agricultural Depot, 100 Murray-st., New York. HENRY F. DIBBLEE.

PERUVIAN GUANO, Government brand.
SUPERPHOSPHATE OF LIME,
BONE DUST.
For sale by A. LONGETT, 34 Cliff-st., New-York.
Aug. 1—m2t.

KNOX'S Steel Horse Hoe, Carrot Weeders, &c., for sale at Agricultural Depot, 100 Murray-st., New-York. HENRY F. DIBBLEE.

SOUTH-DOWNS.—J. C. TAYLORS' 9th Annual Sale of South-Down Lambs, will be held on the farm of J. G. SMOCK, near Holmdel, on Thursday, Sept. 8th. Lambs all sired by "WORLD'S PRIZE," (the $2000 ram.) For particulars, please send to me for circulars at Holmdel, N. J. J. C. TAYLOR Aug. 1—m1t

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MAPES' Celebrated One-Horse Steel Subsoil Plows for sale at Agricultural Depot, 100 Murray-st., New-York HENRY F. DIBBLEE.

DEVON CATTLE FOR SALE.
I now offer for sale "Mammon," 3 years old, bred by R. H Van Rensselaer, Esq., of Otsego Co., N. Y., from imported stock; is of good size, perfectly kind, and has proved himself a sure and superior stock getter.

"Young Metropolitan," 1 year old, bred by Joseph Juliand, 2d, of Bainbridge, N. Y.

"Moss Rose," 3 years old, bred by Joseph Juliand, 2d; now in calf to "Metropolitan," a bull recently sold by me to Joseph Cooper, Esq, near Cincinnati, Ohio.

Also fifteen superior, high grade heifers, from 1 to 4 years old. They are mostly got by "Metropolitan" from grade cows, and are now in calf to "Mammon." Nearly every animal offered has taken from one to six prizes at our State, County and other Society Fairs.

If applied for soon, they will be sold upon reasonable terms. JOHN BANKS.
Bainbridge, N. Y., July 28—w2tmtf.

PERUVIAN GUANO, Phosphate, Poudrette, &c., for sale at Agricultural Depot, 100 Murray-st., New-York.
Aug. 1—m1t HENRY F. DIBBLEE.

PORTABLE CIDER MILLS AND PRESSES combined, for sale at Agricultural Depot, 100 Murray-st., New York. HENRY F. DIBBLEE.

Horticultural Books.

Of all kinds, for sale at the Office of the Co. Gentleman.

FORBES.

THE CULTIVATOR.

VAN VRANKEN. N.Y.

THIRD 𝔗𝔬 𝔍𝔪𝔭𝔯𝔬𝔳𝔢 𝔱𝔥𝔢 𝔖𝔬𝔦𝔩 𝔞𝔫𝔡 𝔱𝔥𝔢 𝔐𝔦𝔫𝔡. SERIES

Vol. VII. ALBANY, SEPTEMBER, 1859. No. IX.

Published by Luther Tucker & Son,

editors and proprietors.

Associate Ed., J. J. THOMAS, Union Springs, N. Y.

PRICE FIFTY CENTS A YEAR.

The Cultivator has been published twenty-five years. A New Series was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at $1.00 each.

The same publishers issue "The Country Gentleman,' a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 a year. They also publish

The Illustrated Annual Register of Rural Affairs —144 pp. 12 mo. — price 25 cents — $2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "Rural Affairs,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price $1.00—sent by mail post-paid.

Manuring Grass Lands.

In no department of farming is there a more radical call for improvement, than in the management of our meadows and pastures. Good grass crops are at the very foundation of good husbandry. Land which will produce these largely, will produce grain, corn, and roots,—will sustain a good proportion of stock, and thus furnish within itself, the means of keeping up and improving its fertility. These assertions are seemingly so self-evident, that we must beg pardon of the intelligent reader for referring so frequently to the subject. And yet the intelligent reader who looks, perhaps, over his own farm, certainly on the farms around him, will see that no word is out of place, which can attract attention to the question before us. We shall now remark simply on top-dressing meadows—the present being a favorable season for the operation.

For improving the yield of grass, and adding to the permanent fertility of the soil, we cannot do better with our fine manure, than to apply it after haying as a top-dressing to dry land meadows or pastures. It will give new vigor to the growth of grass, and increase the thickness of the sward, so that even were it to be plowed the next season for a grain crop, the manure could not be better timed or applied. For meadow or pasture the product would be largely increased both in quantity and quality. On wet land, draining should precede the application of manure, as no great benefit can be gained from manuring a soil saturated with water during the wet seasons of the year.

On loamy soils, the different composts of muck with manure, ashes, lime, guano, etc., will be found valuable, and an addition of plaster to the compost cannot well come amiss. For mucky soils, manure composted with loam or clay will be appropriate, and these alone—as is the case with muck on upland—will be found a valuable means of improvement. Bone manure, when it can be procured, is an extremely valuable fertilizer for grass, and no farmer should neglect to employ in a broken state, all the bones within his reach upon the farm.

We have seen an account of an experiment where dry straw spread thinly over the surface of a meadow, after haying, produced a large increase in grass—acting, perhaps, as a sort of mulch to the roots, preventing the effects of drouth, adding also a light manuring as it decayed. Turf ashes act very beneficially upon grass land, and some farmers use them largely as a top-dressing for meadows.

Clover and Gypsum.

Clover was first cultivated, we believe, among the Dutch and Flemish farmers, and formed one of the causes for the superiority of the husbandry of the Netherlands over that of the countries around it. From thence, in the sixteenth century, it was introduced into Great Britain, where it has been instrumental in converting some of the most barren and worthless soils into the most fertile and profitable. Clover and Gypsum, or plaster of Paris, were brought into the United States about 1770, from Germany, where the benefits resulting from the application of the latter in the growth of the former had been discovered by accident. And often thus are facts of importance discovered—principles, the practical application of which exerts an immeasurable influence on the prosperity of a country, and of the whole civilized world.

That the use of plaster in promoting the growth of clover, and the introduction of the latter into the course of rotation with grain crops, has added much to the productiveness and value of our farms, no one will be disposed to doubt or deny. Nor will they refuse to give credit to the public spirit of such intelligent and influential men as Judge Peters, Chancellor Livingston and others, who were instrumental, both by precept and example, in its early introduction into Pennsylvania and New York.

In restoring worn out soils to fertility, clover and gypsum fill an important part in the management and economy of the intelligent farmer. Clover is a profitable pasture and hay crop, and with the aid of plaster, easily grown on most soils, while its growth acts as an improver of the soil, equal in effect, in many instances, to a dressing of stable manure. Like other leguminous plants, it seems to make but slight demands upon the constituents of fertility in the surface soil—drawing largely upon the atmosphere and upon the depth of the soil for its support. Its roots are large and numerous, and its stalks extensive, with abundant foliage, supplying a large bulk of vegetable matter, both for forage and for ameliorating the condition of the land. A luxuriant growth of clover is an excellent preparation for any and every crop. The soil is deeply and finely loosened by its roots, which bring to their support and to the surface the valuable salts in the subsoil, not otherwise brought into service. This length and vigor of root, shows us why clover delights in deep strong soils, and why, when the subsoil plow has opened its easy way, such abundant crops are sure to follow.

Though plaster is of the highest value to the farmer, its effect in the production of clover cannot be relied upon, if applied alone for a series of years. Thus alternate crops of clover and wheat, finally so exhaust the soil, that clover will not grow, and hence can no more be relied upon to furnish new supplies of fertility for the grain crop; but judiciously applied, with occasional dressings of barn-yard manure, and a rotation, including a greater diversity of crops, its value will continue to be seen, on all soils not already well supplied with its mineral constituents. Of these and of its practical uses, we shall speak hereafter.

Late Planted Corn—"Do Your Part."

In many sections a considerable part of the corn crop was planted rather later than usual—or was replanted late, after the frosts of June 4th and 10th, which really or apparently destroyed many handsomely growing corn fields. The drouth prevailing since that time until recently, has kept the crop backward, but recent favorable weather again gives it a vigorous push, and we have now an excellent prospect for a corn crop. To make it good, we have only to "do our part"—in the way of clean culture—as illustrated by the following anecdote.

In 1855, a farmer in Ohio, as he tells the story in the *Ohio Cultivator*, had thirty-five acres almost entirely destroyed by cut worms. He planted and replanted until he almost despaired. Seeing his despondency, a Quaker neighbor told him, "Thee will get corn yet; do thy part, and if thee don't raise enough for thy use, come next fall and I will give thee all thee needs, *but thee must do thy part.*" He accordingly went to work in good earnest—plowed, hoed, and kept his fields in good order, and the result was, that both cribs could not begin to hold his corn in the fall One field, replanted on the 16th of June, yielded good sound corn. Such is often the result. A great deal depends on the care which a crop receives from the farmer.

It is never too late or too early to work among corn, when there are weeds to destroy, or a hard crusted soil to make mellow. Of course there is a best time for these things—and the best time for destroying weeds is as soon as they fairly appear above ground. While the roots are small and tender, they are easily killed and effectually put out of the way. A large weed, on the contrary, may be hoed up, and torn from the soil, but its roots are full of life, and again take hold and grow, especially if damp weather follows. Besides the labor of cutting up one large weed is adequate to the destruction of all the small ones one stroke of the hoe can reach—and a well directed stroke will reach hundreds. But large weeds can be destroyed They must be destroyed, if we would "do our part" toward getting a good crop. In many fields there are comparatively few weeds—these few should not be allowed to go to seed, and thus stock the soil for future harvests of toil and worthlessness. If we *do our part*, we shall save ourselves a great deal of trouble in the future, as well secure a fair reward in the increase of the present product.

As to mellowing the crusted soil—if the ground was properly prepared, this will now scarcely be necessary. Until the crop is large enough to shade the ground pretty well, the cultivator will be less injury to the roots of the corn, than its operation will balance in benefit. We have seen the suggestion to cultivate alternate rows, so as to leave the roots on one side of each row uninjured, taking the other row a few days afterwards, when the disturbed roots had again become established. New England farmers are using a new subsoil plow, working below the depth of the plowed soil, and disturbing the roots but slightly. But we must conclude, with the remark that every farmer can see for himself what more he can do to perfect *his part* of the business.

Mr. Webb's Ram-Letting.

Mr. Jonas Webb's annual South-Down Ram-Letting at Babraham, has become one of the institutions of England, the *thirty third* having been held on the 7th of July—a full report of the doings at which we find in the Mark-Lane Express. Fifty-four rams were let—three 4-years old, whose fleeces averaged 9 lbs. 5 oz.—fourteen 3-years old; average of fleece 8 lhs. 10 oz. —fourteen 2-years old; average fleece, 8 lbs. 10 oz.—twenty-three yearlings; average fleece, 8 lbs. The company present was large, and the competition brisk, the total lettings amounting to $6,880, or $120.74 per head, which was an average of about $22 per head over that of last year.

At the conclusion of the business, the guests and visitors, to the number of about 200, sat down to a dinner prepared for the occasion, at which Major Pemberton presided as chairman. From the report of the doings at the table, in the Mark-Lane Express, we select the following:

Mr. Webb gave, "The healths of our friends across the Atlantic," coupling with the toast the name of Mr. L. H. Tucker, on the staff of one of the agricultural journals of the United States. Mr. Webb added that he had received an order to send a ram to the United States at 150 guineas.

Mr. Tucker said, in two respects Old England—for they were still fond of calling her Old England across the water—was so famous, viz., for her hospitality and for her agriculture, that while he was sure that neither could excel the other, he was equally sure that it would be difficult to find elsewhere an example of both similar to that which had been witnessed during the day. And when he saw so many gentlemen connected with the pursuit of agriculture, not as a recreation or as a means of spending money, but with something of that energy which had placed British commerce and British manufactures in their present proud pre-eminence, he could not but appreciate the solid basis on which English institutions stood, and the services which had been performed for agriculture by such gentlemen as Mr. Webb. American traders and merchants, when they wished to secure the best, had recourse to the achievements of British genius and the excellence of British products; and American farmers acted on the same principle. The prodigies which had been performed in the improvement of the sheep and swine, and the creation of such a breed as Shorthorns in cattle, were no less triumphs of genius; and for whatever excellence Americans could boast in their show-yards, for that kind of animals capable of producing the most beef, mutton, and pork, at the least expense of time and food, he most willingly and cordially acknowledged their indebtedness to English breeders, among whom he was most happy to find himself that day, and many of whose names were known all the way from France to Australia, as well as on the banks of the Hudson river where he lived, and the still more distant and almost boundless prairies of the Western States. He might conclude by expressing the pleasure with which he had observed that Mr. Cobden—who had just returned from a journey in America, and whom he had the pleasure of meeting there last spring—in his first speech after landing at Liverpool gave the fullest assurances derived from his own personal observation and knowledge, that the people of America still looked back to England—although perhaps as a grown-up and somewhat wayward boy might look back to the home of his fathers—with the deepest sympathy in all the progress she could make, with the utmost confidence in the good-will of her inhabitants, and with the proudest anticipations for her future no less than for their own.

Letter from John Johnston.

Near Geneva, 27th July, 1859.

Messrs. Editors—Since my last, the weather has been remarkable for the season—thermometer seldom above 70 at 2 P. M.; at 6 P. M. last evening it was 60—this morning, 58. Ever since 22d of last Nov., when we had our heaviest fall of snow, (until 23d April,) we have had remarkable changes in the weather. I have kept a partial jotting of the weather for a number of years, and I can find no such weather as we have had since 22d Nov. What says our weather friend, Mr. Merriam of New-York city?

I have a letter from Huron Co., Ohio, of 20th inst. The writer says, "we have had some excessive hot weather—thermometer from 96 to 102 in the shade. The drouth also excessive; corn and pastures all dried up. As to hay, we have none. The sheep and cattle must live on straw and what corn-stalks we may have, for all of next winter. What wheat we had was good, but the frost took by far the greater part of it; what is left is of fine quality. The frost was also the ruin of our hay crop."

Our hay in Seneca county, is light; still on good land, that is manured land, it is a fair crop. My timothy meadows will yield about or nearly two tons to the acre. On Mr. Swan's farm, we tried two acres of a 40 acre field, that was well manured with cattle and sheep manure before the last wheat crop, (no manures of commerce were used,) which gave on the two acres five and three-quarter tons of thoroughly dried hay, and it was not better than the average of the field. This shows what manure does. *With manure we can have a plenty of everything.* I know it is said that I force my farm by manure, else I would not get such crops; but I make the manure; all I ever bought was half a ton of ground bones something like eighteen years ago—latterly four tons of guano and one ton of Taefew, but I found these would not pay. I can have better manure in my cattle and sheep yards for nothing, by feeding plentifully of oil-cake, meal and grain, and this I think is a far more sensible way of manuring land, than importing it from the tropics, or having it manufactured in New-Jersey. John Johnston.

P. S.—At 6 A. M., thermometer 58—at 10, 55°.

The Cherry Currant.

This is the largest of all the red currants, frequently measuring five-eighths of an inch in diameter, and ordinary crops from half an inch to a little less. It was formerly supposed to be a moderate bearer, but is now found to be productive. The following is the amount of a crop which we gathered this year. The number of bushes was twenty-four—they were set out in 1857, when very small, and this is their third summer. As it was intended to remove a part of these ultimately, they were placed temporarily quite thick, or the twenty-four in a row thirty feet long. The fruit this year hung in dense masses, and the row yielded a full bushel by measure. They were planted in common unmanured garden soil, and kept cultivated. An acre, like these, in rows four feet apart, would have given over three hundred bushels.

Farmers, plant out a good supply of small fruits, which give such large, certain and speedy returns—not forgetting strawberries, which, with good care and good sorts, will give at least one hundred bushels per acre the second year. Rochelle and Dorchester Blackberries, which will do about the same the third year—and Houghton's Gooseberry, which will exceed this amount the fourth year and afterwards.

But remember to give them good cultivation.

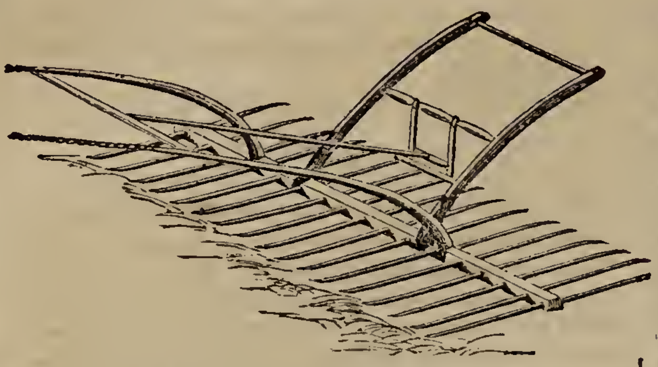
Strawberries.

Messrs. Luther Tucker & Son—As we are ambitious of raising fine Strawberries, and having what we imagine to be good plants, some of them bearing berries (4½ inches in diameter) without any attention being paid them, I am led to inquire of you the particulars as to how we shall proceed. When must we transplant? And must we leave runners? And do they need manure on a rather sandy soil? How long can they live and bear well? F. B. Evans. *Commack.*

First, procure the *best sorts*—among which, of the larger varieties, are Hooker and Wilson—and McAvoy's Superior for the southwest Hovey's seedling sometimes succeed finely. These and the Triomphe de Gand, (which we have measured two inches in diameter the longest way,) are the largest. The Wilson, Hooker and Triomphe de Gand must be cultivated in "hills," with the runners not covering the whole bed.

Spring is the best time to transplant—next, about or soon after midsummer, just after bearing, and while the plants are yet partly dormant from bearing. Set in autumn, the young plants do not always become sufficiently rooted to endure winter without injury. When transplanted in summer, cut off all the large or fully expanded leaves, leaving only the new half grown ones—dip the roots in mud—settle the earth about the roots by watering—cover them with mellow earth, and mulch an inch or two deep with stable manure free from straw. This treatment will be attended with success, and the plants will bear well next year.

Beds well hoed will last two or three years, or more—if the runners are allowed to cover the whole surface, they should be renewed every second year, by spading under alternate strips of the strawberries, the runners renewing these strips.



The Revolving Wooden Hay Rake

Will you please publish for the benefit of your foreign readers, a cut of this implement, with as complete a description as possible? Many I am convinced, would be glad to avail themselves of it, if you would give the particulars necessary for its construction. T. *Lincolnshire, England, July 28.*

The revolving horse-rake, as commonly constructed, is represented by the above cut. When in use, the teeth lie flat upon the ground, passing under and collecting the hay. When filled, a slight motion of the hand causes a semi-revolution of the rake, and the load is discharged; and the opposite row of teeth by this movement is brought into use, to be filled and discharged as before. The horse is attached to the draught frame seen on the left, a portion of one of the draught ropes being visible in the cut; and the rake is held by the frame which serves as a handle on the right. The teeth are held firmly and flat on the ground, by the pressure of the small square frame, turning slightly on the middle rod of the handles; but when the semi-revolution is to be made, the handles are slightly raised, and this frame which only presses the points of the teeth, is thrown upward a few inches so as to clear the points of the teeth, and the horses still advancing, causes the rake to revolve half a circle. Both the handles and draught-frame are attached to the body of the rake by iron straps passing around it, and by which it is allowed to revolve freely.

The best rakes are now made, not with *curved* pieces for the draught-frame, as shown in the cut, but with these pieces made by mortising two portions together in the form of an elbow. Under these the hay accumulates, and more room is allowed when thus constructed, than if the pieces are merely curved

The rake head is made three inches square, and ten feet long, of the best and toughest timber; the teeth are about 8 or 9 inches apart, 22 inches long besides the part inserted into the head, and an inch and a fourth by two and a half at the head, tapering to the points. The cost of construction is about six dollars.

As the horse moves onward without stopping, one man and a horse with this rake, will easily collect into winrows more than two acres of hay per hour, which on good meadows would not be less than forty tons for an entire day, being about four cents a ton for raking. The rapidity with which hay may be secured from approaching rain, is a most important advantage which this rake possesses.

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☞ We learn that Mr. John Banks, of Bainbridge, N. Y., has sold his fine Devon bull "Metropolitan," recently advertised in this paper, to Mr. Joseph Cooper of Lackland, O., who, we are informed, has a very superior herd of Devons.

Seasonable Improvements—Clearing Swamp Holes.

As recently stated, the leisure period between the early and later harvest, in a part of August and September, affords the farmer an opportunity to accomplish improvements which cannot be effected as easily and well at any other season; and the clearing and draining of bogs and marshes is among those of superior importance. We have already given several articles on this subject—but the vast amount of waste land yet to be reclaimed, and the great profit arising from bringing it into fitness for cultivation, warrant repeated presentations of the question to our readers.

The wettest bogs and marshes generally contain the least water at this season, and hence allow to a greater extent, the cutting of drains and the clearing off of bushes than at any other period. The water once removed, and the drains so constructed as to carry readily away all surplus moisture, we have land of superior quality and productiveness, especially for oats and grass, and for some root crops in favorable seasons. Instead of "plague-spots" disfiguring the surface of the farms, producing only worthless plants and disgusting reptiles, and filling the atmosphere with malaria, we have handsome fields, producing luxuriant crops, and smiling with plenty—repaying at once a considerable expense of reclamation. We have so recently spoken of methods of clearing, etc., that we will now only touch upon another branch of the subject.

Muck or peat bogs, which have been drained, usually produce well for a time, and then seem to "run out"—wild grasses taking the place of those first sown upon the soil. This is usually caused by their settling as the land becomes dry—becoming more compact, and finding a level so much lower as to make the drains partially useless. Or the drains may become filled up, with the same result. Or it may be that the surface soil, above the water line, becomes exhausted and needs renewal There is something in the nature of muck or peat, which renders exposure to the sun and air necessary before it will produce the tame grasses (or cultivated crops of most kinds) to perfection—before it loses this tendency to run them out. It needs plowing up every five or six years, so that the muck may be further aerated and decomposed—its sourness passing off in the process—and if then re-seeded and re-manured, will become as productive as before.

The present is a favorable time for clearing and deepening and clearing the drains, and plowing up such old meadows—which may then lie until another spring, and then be seeded lightly with oats and heavily with grass seed; and if during the winter, an inch or so of loamy soil were added, the improvement would be more permanent and effectual.

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Natural History.—We learn from the Prairie Farmer, that at the coming fair of the Illinois State Agricultural Society, at Freeport, there is to be exhibited specimens of natural history of the state, including collections of the minerals, plants, birds, shells, insects, &c. A suitable museum building has been erected by the society, and it is believed this will be an attractive and important feature of the annual show.

Milking in Silence.—At the Farmers' Club at West-Cornwall, Connecticut, one of the members observed that no talking should be allowed while milking was going on. Another said he had discharged a man because he would talk and interrupt the milking in his dairy, and in three days the increase of milk was equal to the man's wages.

Cultivation of Wheat—Requisites to Success.

The very general success of the wheat crop of the present and last season, so far as the ravages of the midge were concerned, will doubtless lead to more extensive resumption of its culture, and we hope with continued good result. Yet we cannot but fear that looking at the favorable crops of this and last year, other and important considerations will be lost sight of, and hence disappointment in many instances follow. Let us recall some of the requisites to successful wheat-growing at the present time.

1. We must sow an early and hardy variety—like the Mediterranean, or the Golden Drop, and some recently introduced varieties from the South and West—the Dayton, the Kentucky May, the Rugg and Boughton wheats, and several other promising varieties. The old red wheats are improving in quality and yield under better culture, but if we can secure any advantage by seed from other sections, as no doubt we can, it is well to introduce and test them. Wheat ripening earlier than our former favorite varieties is requisite to evade the midge—though this year, we believe, the Soules' wheat has escaped its ravages in some instances. All kinds of wheat headed out much earlier than usual the present year, allowing the chaff to harden before the appearance of the midge, but ripened slowly, and but little in advance of the usual time—a circumstance which may not occur again in many years. We much fear that *we cannot take the present season as our guide for future operations in wheat growing.*

2. Early sowing is requisite—that the plants may ripen early, as they will if they get a fair autumn growth, enabling them to withstand the rigor of winter, and enter the spring prepared for tillering so as to fill the ground. Some would sow as soon as the last week in August, but with an early ripening variety we should prefer from the 10th to the 15th of September, as security against the ravages of the Hessian fly.

3. Good culture is requisite to successful wheat growing. On heavy soils there is no better preparation than a thoroughly worked summer fallow. It should be mellow and moist, though if rough and cloddy, it is none the worse. If sown after other crops, one good plowing only is necessary; then, unless the land is very rich, give a light dressing of well rotted manure, cultivate or gang-plow to mix it with the surface soil, and then sow on the seed. If the soil is inclined to be too light, harrow it thoroughly, which will assist in packing the soil, and leaves the surface in better condition for winter wheat than results from the use of the roller.

4. We may have the best varieties, sow them early upon a thoroughly prepared soil, and yet if that soil lacks drainage, our success is problematical. A practical writer on this subject says, (and we have said the same before:) "freedom from stagnant water is an indispensable condition of a good wheat soil. If cold, wet, and sour, a good crop of wheat cannot result." What is called a *warm*, *quick* soil, we repeat, is the most certain to secure a thrifty, perfect growth, and an abundant product.

On gravelly loams, fine wheat can be grown; still as heavy crops are not usually produced as on heavier soils which have been underdrained. Some proportion of clay suits the wheat crop, and often such land, well prepared and properly provided with surface drains, produces a better crop than the dryer upland.

These conditions must have their weight with every wheat-grower. We see farmers, however, who from the success of those around them, are now led to resume wheat growing, upon impoverished and ill-prepared soils, without manure—with little attention even to surface drainage; also sowing so late, that even in the most favorable days of wheat culture, winter-killing and rust would be the almost certain result. We would warn our readers that careful and adequate preparation is still an essential requisite—that early varieties, early sowing, a warm, dry soil, entirely free from stagnant water, and a good state of fertility, *with a favorable season*, can only be relied upon to secure a good wheat crop. We must not place too much dependance upon the hope of continued success.

Plowing Up Grain Stubbles.

The best management of a stubble field, which is not seeded to grass, but is intended for a plowed crop the next season, is a question of interest, and yet one we seldom see discussed in agricultural literature. Not only is the subject passed by without written remark, but the stubble fields themselves are equally neglected; are often allowed to perfect a crop of weeds, filling the soil with foul seeds, largely injuring the crops which follow, or rendering a large increase of labor necessary to the proper culture of the crop. A far better way would be to plow under this growth, as it would clean the land and benefit the soil, and some thorough farmers of our own and other countries, follow this practice.

This subject was brought to our notice by coming upon a communication by Mr. Hubbard of Hampshire county, Mass., to their Ag. Society, some years ago. He recommends a more thorough system—he would plow soon after harvest, and give a light seeding of rye, expecting, and in many trials receiving, the following benefits therefrom: The fall feed, which will pay for the seeding and plowing; a green crop to turn in as manure in the spring, equal to five or six loads per acre; autumn plowing, pulverizing the land, and saving more in fitting it for the crop, or in the first hoeing, than the expense of the work; the destruction of the seeds of noxious weeds turned under before they ripen; a deepening of the soil—the team being well rested from the spring's work, are able to turn a good furrow.

These remarks apply more particularly to light sandy soils—such as are most suitable to the growth of rye. Our heavy lands would often be too hard, in our dry seasons, for early autumn plowing; nor are they well suited to the production of rye or constant cropping. Late fall plowing would here be most beneficial, with special attention to surface drainage. But light lands, treated on the above system, would produce a heavier crop of corn, roots, or spring grain, with the same manure, than if allowed to remain an untilled stubble through the winter.

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"Weeds in the Corn."—A western cotemporary speaks of a cornfield seeming to have been left by the owner to take care of itself. "The weeds have invaded the field, and the only good they are possibly doing, is that they act as a mulch to the plant, which would otherwise suffer from the dry weather." Rather questionable "good," the mulch of living weeds. We find the soil far dryer in the cornfield, where covered with weeds, than where cleanly cultivated, and believe such is always the case.

Seasonable Farm Improvements—Destroying Weeds.

The comparatively leisure season occurring after haying and the early harvest, and before that of the later crops, may be considered the most favorable period of the year for making some of the most important improvements of the farm. Not only are the usual farm labors less pressing than usual, but other circumstances, hereafter noted, render it a suitable time for destroying weeds in bye-places, or wherever found; for clearing swamp holes, and draining bogs and marshes; and last, but far from least, for getting out muck to increase the amount and value of the manure. We shall offer some hints on each of these topics, repeating, perhaps, suggestions before made in the Cultivator and Country Gentleman—but needing as much as ever, urging upon the attention of our readers.

Of the many farm improvements necessary to the beauty and the profit of the homestead, none are more important than the destruction of the weeds and bushes along the fences and roadsides; in pastures and cultivated fields—in short wherever they appear—so unsightly to the eye, so detrimental to the growth of valuable crops, and so certain to increase in extent and amount of injury. As formerly remarked, (Cult., Aug. 1850,) "thistles, docks, briers, &c., are often allowed to flourish unmolested in the bye-places of the farm. On the borders of the fields they occupy the richest of the soil, and annually extend their encroachments. They are not unfrequently seen in good lands, that are devoted to various crops, and in pastures are quite common—many farmers being apparently regardless of their presence or effects." A little thought will show how injurious the result of such products upon the prosperity of the farmer.

One means of their eradication would be to carry out the rule to the letter, "that no weeds be allowed to perfect their seed undisturbed." This will keep all annual and biennial plants from spreading, and as soon as the supply of seed in the soil is exhausted, will rid the farm of their presence. Many perennial plants can be materially checked in this way, and constant cutting will destroy the most persistent in vegetation. No plant can live without leaves—even Canada thistles soon perish under this treatment. Docks and mulleins may be destroyed by pulling after they have formed their stalks. Those that break off should be cut a few inches below ground, and they will not again shoot forth; the crown of the root only sending forth buds and fresh leaves. The yellow dock is a rapidly spreading plant, if allowed to seed, and too much pains cannot be taken to root them from the soil, both by digging and pulling. The presence of the burdock indicates a very rich soil, and such soil should be put to a better use than the production of this pernicious weed. To those who keep sheep, the destruction of this and all bur-bearing plants is especially important.

Briers and other bushes, if cut at this season, will be nearly destroyed. They have finished their new growth, and are now forming buds for another year. If cut closely, but few sprouts will start up, and these may be readily kept down by bruising with a stout stick, or pasturing with sheep—a few seasons of such treatment will root them out. If grass seed is sown where they are cut away, it will soon fill the ground and hinder their return, especially if the situation has allowed them to be burned upon the ground.

If the farmer who does no more, would simply make it a rule to mow the fence corners of his grain fields every year, and every pasture lot containing any injurious plant, he would soon make a marked improvement in the appearance of his farm. Nor should the roadsides and borders of wood-lands be neglected—these often afford crops which seed whole neighborhoods with pernicious plants, and entail many losses and vexations upon the farmer.

The Carbon of Plants.

The queries recently proposed on this question (Co. Gent., July 14, p. 29,) induces us to give in a condensed form, the remarks on this subject below. They are drawn from Stockhardt's *Chemical Field Lectures*—a work of great interest to the thinking farmer.

"Whence does the plant derive its carbon?" asks "J. B. C." The question is fully answered by our author. Plants absorb carbon in the form of carbonic acid—an unfailing constituent of common air and spring water, and formed in every soil that contains humus. Carbonic acid is a kind of air generated in extraordinary quantities by the three chemical processes every where going on, viz., respiration, combustion, and putrefaction. It is also evolved in fermentation, and, lastly, streams from the crevices of many regions of the earth of volcanic formation.

The carbonic acid generated by these different processes is all taken up into the air. If there were no compensating process, the air would gradually become changed and unfit for respiration; more especially as in breathing, combustion and decay, free oxygen, or vital air, is removed from it. But it is wisely arranged that the oxygen suffers no diminution, nor is there an increase of carbonic acid. The vegetable world is not only a supporter, but a protector of animal life. It provides the whole animal kingdom with nourishment, and restores again to the air the oxygen abstracted by the former. "For plants by their roots and leaves absorb carbonic acid as their most important article of nourishment, and by their green or herbaceous parts again exhale its oxygen during the light of day. On the other hand, they firmly retain the carbon of the carbonic acid, and appropriate it to the construction of their leaves, blossoms, and seeds, and the proximate constituents which these contain."

Wherever plants are produced, carbonic acid is generated in the soil. The plants, in their various parts, and the animal life feeding upon them, are *living*, and subject to death, corruption and decay—and thus their carbon again becomes carbonic acid. Vegetable mould, or *humus*, is the name given to such decomposed organic substances, and they are constantly altering in constitution, becoming more and more decomposed, and throw-off fresh supplies of carbonic acid to the roots of plants as their nutriment. At the same time the azotized and mineral substances which humus contains become soluble—often by the aid of this carbonic acid—and capable of being received as food by plants in the same manner.

"Does the plant absorb *any* carbon from the soil," again asks "J. B. C." Let Prof. Johnston answer. After a careful argument on this question, he says:

"We may consider it satisfactorily established, that while a plant sucks in by its leaves and roots much carbon in the form of carbonic acid, it derives a *variable* portion of its immediate sustenance (of its carbon) from the soluble organic substances that are within reach of its roots. This fact is never doubted by the practical husbandman. It forms the basis of many of his daily and most important operations, while the results of these operations are further proofs of the fact."

The queries of our correspondent are important, but it seems to us that most of them have been freely discussed in our columns. It is a subject, however, on which we can scarcely hear too much, and we hope will call out those who have made original researches into the nature and action of manures.

Weeding Beans with Sheep.

The culture of beans is still pursued to a considerable extent, though less profitable than when the market ruled prices double the average of late years. Some farmers simplify their culture and reduce its expense by feeding down the weeds with sheep, instead of hoeing them—especially if grassy—turning them on as soon as they need hoeing, and watching carefully to turn off as soon as their work is finished. The sheep should not be very hungry when first turned in, or they will take grass, weeds, and beans together; they will not usually touch the latter while the supply of the former holds out. When the beans get six or eight inches high, they should be cultivated, with the implement so arranged as to throw the dirt under the hill—this will be all that is usually necessary. If the weeds come up again, the sheep may be turned on for a few days, though the beans by this time are generally large enough to cover the ground and keep down all injurious vegetation.

Transplanting Fruit Trees.

MESSRS. EDITORS—Can you or any readers of the CULTIVATOR, inform me the most suitable time to set fruit trees, such as apples, &c., as some say the fall is the most suitable, and others the spring—so, as I am not experienced, I write for information. Also the manner of setting them, and how the ground should be tilled, and the crops that should be raised on the land while the trees are small and tender. T. R. W. *Newport, Me.*

Autumn and spring each have their peculiar advantages for setting out fruit trees. The advantages of autumn transplanting are, the soil becomes well settled about the roots, and the trees are prepared to make an early start in the spring. The disadvantages are that trees are always made more tender by removal for the endurance of the first winter; and the soil hardens on the top into a crust, and the trees will not then grow so well as when the soil has been lately stirred in setting out, as in spring Hence, tender trees in severe climates should not be transplanted in fall, unless they can be protected by a shelter from the winds or by a screen of evergreens, and unless the ground is dry and well drained, naturally or artificially, so as to avoid the injurious results of freezing about the roots. Hence, also, that numerous class of cultivators who never cultivate their young trees at all, should always set in spring, for in doing so the trees will be more apt to have a mellow soil about them, during the early part of the season, than if the soil has become hardened by setting all winter.

Unless the locality exposes them much to cold wintery winds, and to late fall rains, which cannot drain off, we prefer setting so hardy a tree as the apple in autumn—intending, of course, to keep the soil mellow by cultivation the following summer. Far more depends on good after culture, than on any time or mode of setting out. Ten times as many trees die of subsequent neglect, as from any want of care and skill in transplanting.

As for the best crops to plant among young trees, we should prefer to leave the earth entirely bare, and kept always mellow, for a distance from each tree as far on *each* side as the height of the tree; but those who cannot be persuaded to do this should plant only *low*, *hoed crops*, such as potatoes, beets, turnips, &c., and avoid everything that is sown, whether grain or grass.

Stabling Cattle.

If you have a barn, cellar or shed for the protection of manure, you should begin the middle or last of August, to stable your cattle at night; and we know of farmers who, having good methods for ventilating their stables, keep their cattle up at night during the whole summer. But by the last of August or first of September, your cows and other neat stock, should be put up every night, and by leaving the doors and windows open, they will be more comfortable than if allowed to lay in the yard. The great object, however, of thus stabling your cattle so early, should be to manufacture manure, and we write this for those who have some means for the protection of the same. From September to December is the best season for making manure, of the whole year. Stable your cattle every night, and each morning put in a quantity of loam, dried muck, leaves, chip dirt, &c., to absorb the liquid, and then throw it into your manure shed, or cellar. You will find in the spring a valuable heap of dressing; and if the plan has never been practiced, you will be astonished at the great amount of manure which can be made with a little extra labor, and by keeping your cattle up nights.

Remedy for Cracked Hoofs.

Take a piece of copper four inches long, and two inches wide, and drill eight holes, four in each end, so as not to interfere with the crack, and screw it fast to the hoof, crossways of the crack; then take a hot iron with a sharp edge and burn the crack at the edge of the hair, till it goes through to the quick. After this, let the horse run on pasture, and it will begin to heal up in a few weeks. This remedy I have tried, and it done the work complete, and I worked the horse all the time. Care should be taken to close the crack tight before the plate is fastened on. A PRACTICAL FARMER. *Pleasant Valley, O.*

To Remove Films.

Having seen a number of remedies for taking a film from horse's or cattle's eyes, I'll give the method that I have practiced for years, without failing in a single instance. Take a piece of fresh butter, the size of a common walnut, and put it in the opposite ear—that is if left eye, put in right ear, if the butter is hard, hold the ear with your hand for a short time, until it melts and runs into their head; in most cases one application is all that is necessary. If you have not got the butter hog's lard will answer. G. D. *Williamstown, Mass.*

Management of Pastures.

The subject of grass culture has recently (Co. Gent., April 14, 1859,) received some notice in our columns, and it is a matter we often take occasion, in its different aspects, to urge upon our readers. Looking over THAER'S *Principles of Agriculture*, we find some valuable thoughts on the management of pastures, some of which we condense and some of which we amplify, the better to adapt them to the wants and means of American farmers.

1. *Drainage*—To produce good grasses, pastures must be entirely free from stagnant water either upon or near the surface. This is also requisite to the health of cattle, and especially sheep, feeding upon them. On swampy, marshy ground, drainage is of the first necessity, and constant care should be exercised to keep the drains in order. Though such land may be well stocked to grass, and produce valuable crops at first, if the drainage is interrupted and the water remains on or near the surface to become stagnant in spring, the cultivated grasses will soon give way to coarser herbage—water-grasses, flags, and rushes, take their place. A thorough system of underdraining, or carefuly watched open drains are necessary, and would often be attended with slight expense compared with their effect upon the value and amount produced by the land.

2. *Weeds.*—Care must be taken to eradicate all hurtful weeds, as well as those which crowd out the grass. Thistles in particular, multiply with great rapidity in rich pastures; animals will not touch them, consequently the seed ripens and takes root. They not only take up space which would otherwise be filled with grass, but prevent cattle from eating near their thorny leaves. These weeds are readily destroyed—if mown a few times during the height of their growth, they will eventually disappear, especially if this practice is followed up for several seasons. Most other weeds yield to the same treatment—the most tenacious and hardy cannot live if their leaves are constantly destroyed—and their eradication will be more rapid, if the pasture is at the same time encouraged by seeding and manure to the production of the grasses.

3. *Dung Droppings*—Occasional attention to spreading the manure dropped by cattle and horses at rest, will be advantageous to the pasture. If the dung is left undivided, the plants it covers are at first completely stifled; but the following year, strong tufts of coarse grass shoot up, which the cattle will not touch unless compelled by hunger. But when the manure is spread, the growth of grass is increased, and no distasteful flavor hinders animals from consuming the full product.

II. *Feeding Off*—Pastures should never be crowded with a greater number of animals than they can advantageously support. If fed too heavily, vegetation is checked—the plants have not time to attain a full growth; they are fed down closely, and then, in many cases, torn up by the roots. The injurious and impoverishing effect of this course is very evident. For the same and other reasons, cattle must not be turned into pastures too early or kept there too late.

On the other hand, it is equally injurious to a pasture to be grazed by too small a number of animals. The product is not fully employed, and the growth is lessened by the neglect. The herbage shoots up luxuriantly, and many plants appear which cattle refuse after they attain full growth. These grasses become still more luxuriant, while the finer kinds of herbage, closely consumed by the cattle, and crowded by the stronger plants, decrease and disappear. In permanent pastures, losses more frequently result from this cause than any other. And from those which stand for a few years only, the full benefit is not derived unless they are fed off with the proper amount of stock in due season.

Clover pastures especially, need care in this respect. They should attain a fine start in spring before feeding, and then sufficient stock should be turned on to consume the whole product. Then all, or the greater share, should be removed to other fields, and the pasture allowed rest until a fresh growth takes place, when it may again be fed, but less heavily than before. This course of treatment we have found to give the best results, while a different method allows the grass in spots to assume a mature growth untouched, while other portions are fed closely to the ground.

The advantages of changing pastures was frequently referred to during last year, and we gave (Co. Gent., Vol. XII, No. 13,) a *resumé* of THAER'S argument on the question.

Sherwood's Grain-Binder.

A few weeks since we gave a figure and description of this new machine. We have since witnessed its operation in the field. *It has proved successful*, so far as a single season's trial will establish success. It was attached to one of Wood's reapers, and one man bound with ease all the grain that the machine cut at the ordinary pace of a team of horses. The sheaves were well bound with the annealed wire, but were not quite so compact as ordinary binding, and the straw in some instances was not so parallel. These objections were however of little importance, and will no doubt be partly obviated by further experience. The wire used cost at the rate of about 16 cents per acre; a larger wire, say 20 or 25 cents per acre, would admit of very close binding. The inventor intends to make an improvement by which this object may be better secured, the operation as now performed, tending to break the wire if very tightly drawn, by the weight of the sheaf. Providing a support for the sheaf will tend to obviate the difficulty. An experiment was made by binding a portion of a field with the binder, and another portion by the ordinary mode. In drawing the several hundred sheaves into the barn, only two broke that were bound by the machine, and about twenty of those done by the ordinary way. One most important advantage resulting from the use of the binder, is the perfectly clean stubble, no grain or straw being scattered. This saving is thought to be fully equal to the cost of the wire.

We have no doubt that considerable improvement will be made in this invention, and that it is destined to prove one of importance. Much labor has been expended and many experiments have been made, in perfecting *self raking* machines, in a great measure without success. The present machine, it will be perceived, is of much greater importance. A self-raker saves the labor of a single hand only. The binder saves the labor of three or four hands.

In thrashing grain bound by this machine, the wire was at first carefully taken off and laid aside; but subsequently it was found most convenient to put all through together, merely cutting the wire. It may often however be an object to save it for fence ties, a few twisted together answering well for this purpose.

Culture and Use of Vetches.

Eds. Co. Gent.—Having lately noticed in your excellent paper, various remarks and inquiries about vetches, I beg to offer the results of three or four year's experience in their culture on my *clay* farm.

I find them a most useful crop, and very profitable, as I grow them on land intended for fall wheat, and they take the place of naked fallow, which, indeed, I have nearly discarded, since I commenced their culture.

My plan is this: I make all the manure I can, and keep it over until the fall, then haul it out on the land intended for vetches and fall wheat next year; plow it in at once, and pretty deep, making my lands moderately narrow, and cleaning out all water furrows, cross ditches, &c., as carefully as I would for fall wheat. These lands being kept open by dung, dry by the ditches, and pulverized by Jack Frost, form a splendid seed bed in the spring. I then sow as early as possible, say from 15th to 20th of April, and have hitherto been rewarded by luxuriant crops. In a dropping season I have cut some three times, and still had a good after growth to plow under for the wheat.

My usual plan is to cut some for soiling purposes, (for which they are admirably adapted, all stock eating them ravenously,) and the remainder, when the pods are full, to be cured for winter feeding the sheep.

It is rather difficult to cure, being so very succulent, and sometimes so thick on the ground, that there is hardly room to spread and turn it; but I put it into small cocks and give it time; take it in pretty green, and put lots of salt on it, and the sheep will do the rest. I never saw any thing eaten so clean, or with such a relish as my *vetch hay* last winter.

To all inquirers I say decidedly, try it; write the results to the Co. Gent., and be it his to publish them throughout the agricultural universe.

If I may have a few more lines of your space, to point out the advantage of my system, I would add:

1st. That I consider them less exhausting than peas, or any other crop commonly grown before wheat, *because* I don't allow them to ripen their seed, and this it is that draws so hardly on the soil. (I grow my seed on a separate plot.)

2d. Presupposing that my land is tolerably clean, I avoid the naked summer fallow, which on a small farm is ruinously expensive, and actually, as I can show any visitor, have better wheat and better clover afterwards for years, than where I fallow the land on the old plan.

3d. I decidedly prefer hauling dung at a leisure time, and in cool weather in October, and then putting it *into* the ground where it *is* wanted, to toiling at it at midsummer, when I have hay to cut, potatoes to hoe, *weeds to kill*, and a variety of other jobs "too numerous to mention;" and then leaving it for ever so long in little heaps, to dry out, and "waste its sweetness on the desert air," where it is *not* wanted. W. E. Forster. *Credit*, *Canada West*, *Aug.* 15.

How To Clarify Wines.

Messrs. L. Tucker & Son—In your last paper I see an inquiry for information how to clarify the different kinds of our domestic wines, and I take the liberty of giving you my practice of fining or clarifying all kinds of fermented liquors, which, however, never require artificial clarification if properly managed.

My wines of all kinds are always clear enough to bottle off the lees by March, except my grape wine, which I then rack into a sweet pure cask, in which I first burn a little sulphur—(say a bit of paper one by six inches coated with sulphur, for a half-barrel cask)—as soon as the paper, ignited and hung into the bung hole by a thin wire, is properly burning, the bung is put on tight so as to impregnate the wood of the cask with the sulphuric acid and in 30 minutes I put the wine into the cask, and fill with clean pebble stones to make the wine come up to the bung-hole, and bung up air-tight—then leave it at rest. The cask must be perfectly fast, and not be allowed to move or roll at all, until about the first of May, or in a cold cellar the first of June, when it is bottled. If the wine is not perfectly brilliant, (which all wine must be before bottled,) I rack it into another cask half full; stir in well the dissolved isinglass, fill it with all the wine, put on bung slightly, and bottle the third day, when it will be perfectly clear

I use fish sounds, (one quarter as cheap as isinglass,) and for a half-barrel take a good half-ounce with half-pint of water and a teaspoonful of tartaric acid; as it swells up add a little water, and when fully softened, (in about ten hours,) wash it fine and strain through a fine seive. Before using, beat it fine with a gallon of the wine, and stir well and long in the cask, first and when full. The fish sounds you can get at the druggists, or Shifflin & Brother, William street, New-York, can tell you where to get it at retail.

This is valuable information for which some people have paid money, and I hope it will be some benefit to your numerous subscribers.

The trifling quantity of sulphuric acid and tartaric acid with which the wine is impregnated, is a great benefit, as it prevents the absorption of oxygen from the atmosphere in the vine, and is not at all objectionable in regard to health. I would advise you never to attempt fining wine except it is drawn from the lees into a clean cask. Frederick Seitz. *Easton*, *Pa.*

Cheap and Valuable Paint.

Messrs. Luther Tucker & Son—Yours, requesting me to send receipt for paint, was duly received. At the time it was not in my power to furnish it, for the reason that the book containing it was not in my possession. After many inquiries I found it yesterday in the hands of a neighbor who borrowed it some years since. I did not originate the composition, but found it in the second volume of Chaptal's Chemistry, (pages 68 and 69,) an old work published in 1807.

It is intended as a substitute for white lead paint, and is composed of

Skimmed milk, two quarts.
Fresh slacked lime, 6½ ounces.
Linseed oil, 4 ounces, and
Common whiting 3 pounds.

Directions for mixing are—"Put the lime into a stone-ware vessel, pour upon it sufficient of the milk to make it like thin cream, add the oil a little at a time, stirring to mix thoroughly; add the remainder of the milk; then the whiting (made fine) is to be spread upon the surface, and the whole well stirred. It is then fit for use. It should be frequently stirred while using."

It is applied with a common paint or white-wash brush, and will dry in three or four hours. Two coats make a very perfect paint. It possesses great solidity, will bear rubbing with a woolen cloth, and does not become dingy or yellow with smoke, &c., as much as lead paint.

I have used the composition only for inside of buildings on brick and wood. Twelve years since I painted the over-head flooring and timbers, underside of a store. It is now perfect; holds its color better than white lead; is much more economical, as the chief expense is the labor of putting on.

It is also recommended for out-door work by adding to the foregoing—2 ounces lime, 6 ounces oil, and 2 ounces white Burgundy pitch, the pitch to be melted in the oil by gentle heat, and added to the mixture. Wm. H. White. *Vergennes*, *Vt.*

Cure for Stretches in Sheep.

Messrs. Luther Tucker & Son—I notice in the Country Gentleman of July 14th, an inquiry for a remedy for stretches in sheep. My father has kept from six to twelve hundred sheep at a time, and when one is troubled with the stretches, we get on the fence, take the sheep by the hind legs, and give him two or three sudden jerks, then let him go. If the sheep shakes itself, all is right; but if it does not appear to get better soon, jerk him again. When attended to, I don't know that we have ever lost one with stretches H. G. Wise. *Fleming*, *Cayuga Co.*, *N. Y.*

A Ride on the Steam Plow.

By Prof. Alfred L. Kennedy, M. D.

Editors Co. Gent.—Yesterday will be ever memorable in a life by no means devoid of incident, for then was realized a long cherished wish to ride on a successful steam plow of American invention.—The day was balmy; fleecy clouds and a slight haze shielded man and nature from the summer sun. The oats, the last of our smaller cereals to yield up their treasures, were ready for the reapers, who were now rejoicing over all the land, because of a superabundant harvest. A fit day for the rendering of a judgment on a new means of agricultural progress to inaugurate a great agricultural era. The committees of the Pennsylvania Agricultural Society and of its venerable prototype, the Philadelphia Society for Promoting Agriculture, were in attendence. The extensive grounds of the Oxford Park Association had been thrown open to the committee. And a decision was to be made on the merits of the invention of John W. Fawkes, a Lancaster county mechanic, who after three years of almost despairing struggle and utter privation spent in the embodyment of his grand idea, now submitted the product of his genius to the highest tribunals of his native State and her metropolis. As he stood in the garb of a workman trying his gauges, or, in a sharp, quick tone, which told of mingled confidence and anxiety, giving orders to the foreman, his rough attire, soiled in such a cause, appeared more honorable than imperial purple. By his permission I stepped upon the engine, and stood by his side, as the shrill whistle gave the signal to start. The gang of eight 14 inch prairie plows, which until now had hung by chains to cranes at the rear of the machine, were quickly lowered until they rested on the hard sod. One movement of the lever, and onward we went, up an ascent of about seven degrees, and with a smooth, uniform motion. As the eight shares entered the soil I apprehended a sudden check and strain, like that felt when a railroad train is partially "braked up," but nothing of the kind was experienced. In the enormous driving wheel or rather drum, beneath my feet, I could not detect the least sliding on the sod. *The traction was perfect.*

Before us the beautiful green turf swept under the bow of our gallant craft. Behind us lay a wide deep-brown wake, in which scarce a tinge of green was visible. Under the stern the eight broad waves of sod lifted their crests, and rolled over like surges falling upon the beach. "Steady she goes," as our helmsman with hand upon the tiller, and eye upon the guide-wheels, keeps on his strait course. But we near the edge of our field. Two shrieks of the whistle, and up rise the plows. Starboard your helm! Round sweeps our craft as easily and gracefully as a bird on the wing, and we came again into line. Another whistle, and the plows are lowered, and in less time than that required to follow this sentence, she is off! A flush of triumphant pleasure mantles the face of the inventor. The grade slightly descends. The crowd which has toiled after us up the ascent, quicken their pace. Still we are leaving them. Now only the foremost then the whole party break into a run, and shouts, like those which followed the triumphal car of a Roman conqueror, rend the air.

Many were the warm grasps of congratulation which greeted the American conqueror as he stepped from his car of triumph, and in modest terms proposed to subject the machine to any test which the committees might suggest. "Can you cross-plow the land you have just turned over?" "Yes sir," was his prompt reply, and wheeling his machine into position, he crossed at right angles the furrows previously thrown up. Subsequently gulleys were passed over, abrupt elevations surmounted, and finally the plows were detached and an omnibus hitched to the engine. "Here we are now, right off," cried a facetious passenger, and right off we were, going over the trotting course at a good round pace.

Feelings of intense gratification appeared to animate the entire assembly, and I left the grounds with emotions of thankfulness to that great and good Being, who in our own day had enabled a fellow countryman to make the giant steam tributary to the art of cultivation, and the means of untold blessings to millions. *Philadelphia, July* 21, 1859.

Farming in Western Texas.

The following letter from Maj. Leland, formerly of the Metropolitan Hotel, New-York, has been furnished us for publication in the Country Gentleman:

Comal Parish, Comal Co., }
Texas, 21st June, 1859. }

According to promise, I send a letter from this far off and fast growing section of the Union. The population of this State in 1850 was 212,592; at this date it is upwards of 600,000. Most of the foreign population are Germans, who turn their attention to stock raising. It is tho most profitable business yet followed, in proportion the amount of capital invested. Stock cattle from calves to three years old are worth $7 per head, and four year old beeves $15. Large droves of the latter are yearly driven or conveyed to California, St. Louis, Chicago, and to your Empire City of New-York.

The Texans cut no hay, for there is no need of any. The winters are like your November. Consequently you see in winter, as in summer, large herds of fine cattle grazing over the prairies, the luxuriant herbage affording them ample means of subsistence. Horses do equally as well as cattle. My cavieyard of 281 mares are looking well; the average value at this time $30 per head. Mules at three years old, good sizes, $100 per head. They are sent to the Brazos River and New-Orleans for a market. My sheep are looking unusually well; have three flocks of about 1,200 each, attended by three Germans as shepherds, whose salary amounts to $45 per month. They average about ½ to ¾ blood Merino, and are worth about $5 per head. Shear wool is worth $1 per head in your market yearly, if it is properly washed and packed clear of burrs Freight from here to New-York, one and a half cents per pound. I do not claim that Western Texas, where my ranch is located, is the best agricultural country, but I do claim it to be the best grazing country in the *wide world*, (you know I have traveled in three-quarters of the globe, and claim to be judge.) I am located on the Guadalupe River, near latitude 29 deg. 25 min., longitude 98 deg. 30 min., elevation 760 feet. About 160 miles from Matagorda bay, my shipping point, "Lavacca," having weekly packets to New-York. The enterprising citizens are building a Railroad to the city of San Antonio, within 35 miles of my ranch. Another road running to same destination from Galveston, is progressing rapidly.

The land in this county is well watered, and plenty of fine timber, live and post oak, cedar, elm; and pecan trees in abundance, furnish the rich pecan nuts, upon which my thousand hogs luxuriate and grow fat. They range sometimes ten miles, and get quite wild. Have to drive with dogs, and a *Hog hunt* is as exciting as a horse race at Epsom Course. Even that pays,—bacon being worth 12½ cents per pound in San Antonio. This county is hilly, plenty of limestone rock. Its area is 1,024 square miles; value of land per acre, improved, from $2 to $5; unimproved, from $1 to $4 per acre. No swamps, marshes or stagnant pools. Is a high, dry, and healthy country. Thermometer rarely goes below 45, or above 85 degrees. The State is out of debt, and has $2,000,000 in her treasury, set aside for internal improvements, interest upon which goes to support common schools. Texas also owns more than 1,500 000 acres of the best land in North America, and 15,930,776 acres, besides improved and unimproved farm lands, upon which they raise large quantities of sugar, cotton, rice, wheat, corn, and tobacco, with trifling taxes, only 12½ cents upon $100, valuation, (and that you can fix, without being qualified,) shows Texas to be the very best State to emigrate to. It is literally the land flowing with milk and honey. All one has to do is to milk and to gather the honey. W. W. Leland.

The Cost and Profits of Drainage.

The "advantages of drainage" admitted, and its modes of constructing drains being understood, the next items of interest are the cost and the prospect of compensation. If the work will not pay, then of course it must be given over as utterly impracticable. As to the expense, operators are very generally agreed that a ditch three feet deep, and of suitable width, will cost from 30 to 40 cts. per rod, when the work is done by hand alone But of late a ditching plow has been constructed, which admits of the successive elevation of the draught-beam and handles, so that the earth may be loosened by it to the required depth. To this plow a span of horses is attached, by an evener or whipple-tree of five feet or more in length, so as to enable the respective horses to travel one on each side of the ditch. This obviates the necessity of using the pick, and one man with his span of horses and plow, will break up the earth as fast as from six to twelve men will shovel it out. By this means, the expense of excavating for the laying of the tile, is said to be reduced to about 10 or 12 cts per rod. This would amount to about eight or ten dollars per acre, where the drains were put two rods apart. Under the old system of digging by hand, the expense was from $24 to $30 per acre.

Now, if your tile cost you $10 per 1000, and you allow $4 more for transportation, laying, and covering, you have in one instance as the cost of draining an acre of land from $24 to $26, and in the other from $38 to $44. It is seldom, if ever, the expense runs as high as the last sum named, and the general average from $35 to $40. At this cost, experienced men tell us that under-drainage pays for itself within three years. In many instances it does so in the increase of the first year's crop—oftener in that of the first two years; but seldom, if ever, does it fail to repay by the time the third year's crop is gathered.

On this point I adduce the following testimony. Says the holder of a large farm, Renwickshire, England: "I drain so many acres every year, and I find myself always repaid by the end of the third season. If I have spare capital enough, therefore, to go on for three years, I can gradually drain any extent of land, by the repeated use of the same sum of money."

Says Mr. J. Johnston of Geneva, N. Y., when speaking of certain towns in Steuben county, of this State: "Some enterprising farmers have made great improvement, but the great complaint with them is, the want of capital to drain with. Let them, however, only do enough, and they would immediately have faith that it would pay all the expense of draining in about three years, by the excess in crops Thus would they soon find the means to drain."

Of the same purport is the testimony of a person in Cayuga Co., N Y. His draining cost him $32 per acre. The increase on his first crop of wheat, over the uniform average of previous years on the same kind of land undrained, would pay all the expenses of drainage in less than three years; and the increase of his corn crop in something over three years, estimating from the first year's increase. He says, however, "that the year was a very unfavorable one for the trial, so far as corn was concerned, and ordinarily he has little doubt, that the increase of the corn crop on drained over undrained lands in that region, would pay all the expense of drainage within three years." This, as I have said, is about the uniform testimony of those who have tried "thorough drainage" for wet, clayey soils. Testimony of a like nature might be adduced to an almost unlimited extent, but I shall content myself with repeating what is familiar to all who are conversant with the history of draining in England, viz, that when it was about being introduced there, the government offered loans to those farmers who desired to drain, but had not the requisite funds. Many availed themselves of the offer, and the large increase of their crops, enabled them to pay principal and interest within the brief time for which the loan was granted.

Ought not experience like this to convince the doubting, that draining will pay, even though means for its accomplishment must be procured by a loan? But few, if any, of our farmers, need resort to this latter expedient. They can commence on a small scale, and enlarge their operations as success and means warrant.

Do not run wild with the idea, however, that you must drain without reference to the character of your soil. Gravelly, or sandy loams, only need draining when underlaid with a hard subsoil. But cold, wet, clayey soils, which become adhesive after rains, and crack in drouth, may almost without an exception, be under-drained with a certainty of success. Only let there be no half way work about it—a drain here or there on a ten or twenty acre lot—but one three feet deep, every two rods, and then you may be sure the experiment "will pay." R.

The Wheat Crop—Seed Wheat, &c.

Near Geneva, 23d July, 1859.

Messrs. Editors—I have threshed my Missouri wheat, and have got 30½ bushels from the not quite one bushel sown. I have no doubt but the Hon. H. L. Brown sent away a full bushel, but it was put up in an enormous strong box, and no doubt some person thought it contained something more valuable than wheat, as an augur hole had been bored in one side and plugged up, and some had no doubt been lost in that way, as it would lack nearly if not quite a quart when it arrived. The yield is very satisfactory.

We have had some hot weather of late, though cool to-day—thermometer 57° at 6 A. M. Corn has grown fast of late—I may say rapidly; still it is late, very little beginning to tassel. Our oats are doing better since our rains Wheat pretty much all cut in this neighborhood, and some have near all in. Barley and oats are late; some spring barley will be ready to cut next week. I presume the winter barley is all cut. Hay light on all land not highly manured, especially where it is closely pastured in autumn, and occasionally in winter and spring; much used in that manner, won't pay for cutting. I am expecting a large yield from my Soules wheat. I like it best if I could only make it come in ear about seven or eight days earlier, so that the midge could not sting it. Yours truly, John Johnston.

I have nine letters in three days, all about seed wheat, from Indiana, Ohio, Pennsylvania, Alabama, and our own State; but to make crops earlier, they must go South for seed; this, I think, I am sure of; but I don't see how the gentleman in Alabama can go much farther south. I have got a small sample of wheat sent me from Chili, South America, the finest I ever saw. J. J.

The Hessian Fly.—A correspondent of the *Valley Farmer* writes as follows: "About the middle of August sow a strip of wheat adjoining where you intend to put your crop, say one or two acres. About the middle of September sow your field. When that has come up and shows clearly, plow under the first sown; turn it under well. The *fly is headed* and your crop is safe."

Steam Tillage in Europe and America.

[For the following remarks on this subject, including a full description of Mr. Fawkes' new Steam Plow, we are indebted to President Kennedy of the Polytechnic College, Philadelphia.]

In common with many who have had the good fortune to be present at the 5 days public exhibition of Fawkes' Steam Plow just closed, I have been reminded by the scene, of the description given of the starting of *Fulton's* pioneer steamer on her experimental voyage to Albany. The two events have indeed many points of resemblance. That was the dawn of the era of successful steam navigation. Half a century has rolled round, and we stand at the opening of the grand eventful era of steam cultivation. One Pennsylvanian triumphed over the tempest and the tide. Another now triumphs over the wasteful powers of the wilderness, and rides the conqueror of the prairies. Verily, Lancaster county, proud as she is of her Calhoun and Buchanan, will be prouder still of her Fulton and her Fawkes, whose birth places are but 12 miles apart, and within her wide borders.

Let us not, however, amid our exultation, claim too much. It is not contended by Mr. Fawkes or his friends that he is the first to conceive the idea of applying steam to the cultivation of the soil. There was, if I mistake not, a steam plow at the London Exhibition of 1851. But it awakened no attention. Farmers went there, not to see it, but to see *M'Cormick's American Reaper!* In all the magnificent palace of industry, that was the grand agricultural attraction. Well do I remember hearing a jolly English farmer, as he stood with his hands in the pockets of his "box coat," surveying the reaper, say, "T'will be a pretty good sort of a thing after we've improved it" How I might have retaliated by going over to the English steam plow and saying the same thing. But America has done far better than to improve on an English model. Mr. Fawkes has invented a machine, new in principle, and distinct in its mode of operating. Let me explain. The great difficulty in the way of success in plowing, by steam is expressed in one word, TRACTION. The English early tried two broad tired driving wheels, but these sank too deeply into moist and loose soil, and of course failed. Mr. Boydell, who deserves immortality for his unceasing efforts and liberal expenditure, conceived the novel idea of running his engine on rails, to be laid down and taken up by the engine itself. This he accomplished by hinging seven or eight stout, flat, wooden rails together by both ends, so that they would form a polygon, outside and in the same plane with the driving wheels, and revolving with them, each rail in turn being laid down in front and taken up behind its proper driving wheel as the latter rolled over it. In this very ingenious way Mr. Boydell gets traction, but at a great expense of power. Mr Bray, another Englishman, adopts a similar plan. Owing probably to the high cost, great loss of power and expense of working on soil, the English Agricultural press have, during the last year, practically *abandoned* the idea of using traction engines for tillage, and have advocated the inventions of Fowler, Williams and Smith, on the cable principle. The engine is similar to our powerful portable farm and saw-mill engines, and is provided with a drum revolving horizontally between the four wheels. This engine is placed, for plowing, in one corner of a large field, a tender with a similar drum is placed in the next corner, and over the drums of both engine and tender an endless wire rope passes. To this rope a gang plow is attached, which, by the revolution of the rope, is made to travel between the engine and tender. These are moved regularly down the opposite margins of the field which is thus gradually plowed. The other cable machines slightly differ from Fowler's, by having the cable to pass entirely round the field, instead of across it. Smith's machine costs about $2500 at the factory, will plow seven acres a day, and requires the attendance of an engineer, six men, and a horse and cart to bring water. Fowler's machine costs $2800 at the factory, will plow eight acres a day, and requires an engineer, four men and a boy to attend it.

As I write, the mail brings me the report of the grand trial of steam plows, for the prize of the Royal Agricultural Society of England, just held at Warwick. We have therefore the latest reliable information of the performances of the best English machines. But one traction engine competed, that of Mr. Romaine, which is a return to the old and very properly discarded plan of two driving wheels, and therefore need not be described; especially as the report says it is "*practically inefficient*, even after the vast sums expended on it."

The prize was awarded to Fowler's cable machine, above described, "for the most economical application of steam power to the cultivation of the land." For the purpose of comparing the best English steam plow with the American, I quote from the same report, that "on a stiff, badly drained piece of seed land, having an incline of one foot in ten, it broke up 2 roods, 16 perches per hour, at a depth of about six inches," that is exactly three-fifths of an acre per hour.

Description of Fawkes' American Steam Plow.—The body of the engine consists of one horizontal, quadrangular frame of iron, about twelve feet long by eight wide, which rests upon the axles of a roller. This roller, which is six feet in diameter, and six feet long, is the driving wheel of the engine. In front of the roller, and bolted within the frame, is the boiler, which is upright, surmounted by a dome and pipe, and so constructed that steam may be got up in fifteen minutes. Thirty minutes, however, are usually required. Over and behind the driving roller is the water tank, which is of the entire width of the engine frame, contains 12 barrels, sufficient to supply the boiler for five hours, and is so situated that when it and the boiler are full, they counterbalance each other upon the roller. Attached to the frame in front of the boiler, and tapering forward and slightly upward, like the bow of a boat, is a sheet iron receptacle for coal. Here is also a seat for the fireman, the whole bow resting on two guide wheels of fifteen inches tread, and four feet diameter. Bolted to the under side of the frame, as frequently seen in locomotives, and on each side of the upright boiler, are the cylinders, each nine inch diameter, and fifteen inch stroke, the piston rods of which are so geared to the crank of the roller that it revolves once for every six strokes of the piston. Great regularity of motion, increase of motive power, and control over movement of the engine backwards and forwards, are secured by this arrangement, while the guide wheels, which may be turned at pleasure, by a steering wheel in charge of the engineer, almost at right angles, under the bow of the machine, permit it to turn in a circle, the radius of which is equal to the length of the engine, eighteen feet. By a small independent "donkey engine," which is placed between the tank and the boiler, the latter may be filled from the former, or the tank itself be through a hose supplied from a well or brook. Into the beams, projecting from the rear of the engine, pulleys are let, over which chains pass, whereby a gang of eight fourteen inch prairie plows is suspended; a wheel on the beam of each plow regulates, as usual, the depth of the furrow, and the whole gang may be raised or lowered by a lever within the reach of the fireman, who, with the engineer, constitute the entire force needed to work the engine and plows.

The machine was tested on timothy sod which had not been plowed for seven years. At a given signal from the whistle, the fireman lowered the plows to the ground, which, having entered, they were drawn forward up an incline of about seven degrees. They were lifted promptly at the margin of the land appropriated to the trial, the machine turning easily; again they were lowered and the plowing resumed, in as short a time as could have been done with a single plow and a pair of horses. The mean rate of speed was four miles an hour, and the united furrows were 9 ft. 4 in. wide; a strip 4 miles long, 9 ft. 4 in. wide, equals 197,120 square feet, which divided by the number of feet in an acre, gives almost exactly 4 3-10th acres per hour.

Allowing for the time lost in turning, and all other necessary delays, the engine proved itself fully capable of plowing thirty acres a day. The amount of fuel required being, according to the engineer, a half ton of coal, or the equivalent in wood. The plow was run over gullies and abrupt elevations, and stood every test in the most satisfactory manner. Its performance proved its perfect adaptedness to prairie cultivation, and to the tillage of large fields. By a very simple arrangement, the roller, which is composed of wooden staves bolted to open iron heads, may be lifted from the ground, geared, directly to the piston rod. It thus becomes a rapidly revolving drum, over which a band is passed, and the whole converted into a farm engine for driving saws, thrashing machines, sugar and grain mills, &c. This ready conversion of a plowing locomotive into a farm engine, multiplies vastly the uses of the machine.

To conclude: The American machine will easily and regularly plow 3 acres an hour, with the aid of two men. Fowler's English prize machine may be made to plow three-fifths of an acre an hour, with the attendance of five men and a boy. That is to say, Fawkes with two men, will plow five acres in the same time that Fowler, with five men and a boy, will plow one. That this is the "most economical" of English machines is attested by the highest authority; but we guess that an American farmer would place a plow and a pair of horses each, in the hands of "five men and a boy," and beat Mr. Fowler long before sunset. Let then the record stand, that at the present time the only *economical and practical application* of steam to tillage, is of American invention.

Bees.—Mr. **Geo. Gebhart** of Union City, Indiana, writes us that he made $150, clear profit, on eighteen stands of bees, the last season, kept in common hives.

Muck for the Compost Heap.

During last year we gave a series of articles to show the value and uses of swamp muck, or peat as a fertilizing material—when used by itself and also for composting with all substances of a more active fermentable character—showing by practical examples that it could be very profitably employed for admixture with barn-yard manure, ashes, lime, dissolved bones, night soil, guano, etc., thus largely increasing the amount and value of fertilizing material available to the farmer, and enabling him to improve his land and enlarge the product and profit of the same. We need not now, perhaps, recall or extend remarks on this subject, but a reminder that the present is the most favorable time to secure a supply of muck, may be useful and necessary.

The best deposits of muck are usually too wet for digging in the fall or winter, and can only be drawn upon to good advantage during the dry weather of mid-summer. If available at other seasons, leisure for the work is often wanting. Besides, when comparatively dry, there is less weight to move, and the material is in a better state for use—will lie more lightly in the heaps, and they gain greater exposure to the air while "seasoning." When muck is dug out and piled on dry land, "the air and rains gradually dissipate the acid which the peat contains when in its natural bed, and which must be dispelled or neutralized before the peat can afford nourishment to plants." This acid is neutralized by fermentation, hence, muck may be used in composts immediately from the swamp, though it is less valuable than after exposure and partial decomposition in the air and sunlight.

Where practicable we would advise the farmer, not only to cover the surface of his barnyard (after the removal of the manure) with muck eight or ten inches in depth, but pile all he can find time to draw out, near the barn, to be employed as an absorbent of the liquid of the stables during winter, and for composting with any of the substances formerly mentioned. It will also be found very convenient for mixing with hen and hog manure, in the spring, for hill manuring corn, and also with guano, bone dust, night soil, or superphosphate for a like purpose. When the barn manure is drawn out during the summer as a fertilizer, for wheat, or for top-dressing dry grass lands, muck may profitably form one-half the bulk of the same, especially if the two are heaped together in layers for a few weeks, and allowed to partially decompose, as they should, to attain their greatest value. We are now, every leisure half day, getting out muck and mixing it directly with barn manure, for application to our wheat crop, the same practice last year having proved very successful.

The conceded value of muck for increasing the quantity and quality of available home manures, render it worthy the attention of every farmer within whose reach it lies. Thousands of swamps are now accessible, and there are few places where muck, either from these or from the beds of sluggish streams, or margin of woods and like situations, cannot be procured to any desirable extent by the enterprising farmer.

F. G. Allen of East Hamburg, Erie Co., N. Y., sold the present year *eighty bushels* of strawberries from one acre of land, which yielded him about three hundred dollars, besides the amount paid for commission in selling in Buffalo market. The varieties were chiefly Large Early Scarlet and Hovey. He is now planting the Wilson, and expects larger returns from this sort.

Honey Dew.

To Mr. Quinby—*Dear Sir:* At the suggestion of my friend, Mr. L. A. Brown, who perhaps may have been in correspondence with you upon the topic of honey dew, I drop these lines; and I do so with the greater pleasure, in as much as I have heard through the same source that you had never witnessed the existence of such a phenomenon as honey dew.

The present as well as the spring and summer of 1857, is somewhat famous for its honey dews in this state, (Missouri.) It falls in this country frequently until the foliage of the trees is glazed over sufficiently to make one's hands sticky and unpleasant by handling them, or to soil a person's clothes by riding through the under growth of timber. This particularly occurs in those seasons in which rain seldom falls to wash it from the place of deposit But the phenomenon to which I will more particularly allude, I witnessed in the summer of 1850. I commanded an over-land expedition from the frontiers of Missouri to California; and on Humboldt's (sometimes called St. Mary's) river, between the Rocky and Siera Nevado mountains—when about seventy-five miles above the natural meadow, or about ninety miles above the sink of that river, and on its north side, I first came in contact with the honey dew. By reference to my journal I find that it was on the 11th day of August, 1850. I shall here give you the language of my journal verbatim.

"At this juncture our stock became literally smeared over with honey, so much so that we were compelled to swim them in the river to cleanse their hair—on the discovery of which I immediately repaired to the grove of willows in which they had been brousing, and there witnessed many of the willows with their tops bent to the ground under the weight of honey dew, which had accumulated upon the foliage and twigs, in globules varying from the size of a grain of wheat to that of a large cherry, which forcibly brought to my mind the scriptural account of the manna in the wilderness. These globules were mostly candid. We observed this phenomenon in the last two day's travel, and while among the honey dew we broke twigs from the trees to sweeten our coffee, and satisfied our rapacious appetites completely by eating the larger globules."

This honey was as good and pure, (and better perhaps,) than any that I had ever before eaten. Mr. Jackson, from Hickory county in this state who had been travelling with us, stopped to gather a barrel of honey, but with what success I have never learned. The idea might suggest itself to some that this honey had been accumulating for years, which is contraindicated; first, for the reason that the willows shed their foliage every fall; and secondly for the reason that it rains incessantly through a portion of the winter and spring, which would wash it clean from the trees. There being no rain the latter part of spring and summer, forces the conviction upon our minds that it had all collected after the cessation of the spring rains. I have never seen bees sucking at honey dew, and I have not heard any one else say that they had. We saw no bees beyond the confines of civilization.

The great amount of labor you have bestowed upon the culture of bees, and the vast amount of information you have disseminated through the medium of the press, I hope sir, will be a sufficient apology for this sketch. J. C. Heberling. *Boon's Lick, Missouri, July* 10, 1859.

Butter Making.

From the advanced sheets of the forthcoming Annual Report of Ohio State Board of Agriculture, we make some extracts from an Essay on the art of Butter Making, written by Peter Hathaway, who has had thirty years experience as a practical dairyman. Passing by those portions referring to the choice of stock for the dairy, influence of feed, shelter, &c., we give extracts relating to the care of the milk and churning. to be followed next week by directions for working and packing the butter.

Care of the Milk.—Immediately on the receipt of milk in the house, let it be strained into six quart tin pans, and set on a long, narrow table. or on the floor of the dairy apartment, as the temperature of the season may indicate. For cleanliness and convenience, the table is preferable, but the floor may be used when the weather is very warm.

It may here, once for all, be written down, that great cleanliness must be observed ever and always in butter making. The atmosphere, the table, the vessels, the floor, every thing must be kept sweet and clean. The neat dairy woman will not allow dusty coats, muddy boots, or tobacco odor, to come in close proximity to her butter bowl or milk table.

The time during which the milk should remain set, depends upon the temperature, natural or artificial, of the dairy apartment. Just long enough for all the cream to rise, and no longer, is the rule, economically considered; yet if a sample of very choice butter is desired, regardless of economy, the cream may be skimmed off and churned sweet; this practice cannot be recommended as an ordinary one—it is wasteful. Again, if the cream is skimmed when the milk sours, before it coagulates, or in the phrase of the dairy, becomes lobbard, choice butter may be made; but in order to obtain all the cream, it is necessary to wait till the milk coagulates. Very important is it that the cream be now removed before the milk and cream become wheyish; if this change occurs, good butter cannot be made. It is the want of skill and attention, at this point, that causes much of the failure in making butter, in the practice of ordinary operators. The cream should now be stored in a stone crock; if it is to be kept till the next day, a small handful of salt added, and the mass stirred with a wooden spatula, kept for the purpose. When more cream is added on the succeeding day, the stirring may be repeated without further addition of salt. This process is to prevent the formation of whey. If the dairy is large enough, a daily churning will certainly be preferable; in that case put the cream in the churn as it is skimmed. In warm weather the churning should, in all cases, be performed as often as every other day.

Churning.—The kind of churn I leave to the fancy of the operator. The kind I prefer is an upright cylindrical shaped churn, made of oak; both extremities of the same size, and having a slight bilge, not in the middle, as in a barrel, but swelling a few inches from the bottom. In such a churn, the dash nearly fills the churn from top to bottom, excepting the slight bilge, and all the cream is continuously and uniformly agitated. The cream should be brought by cold or warm water surrounding it, or by such appliances as the ingenuity of the operator may devise, to the temperature of sixty-two degrees Fahrenheit, and at that temperature churned. I have known most excellent butter made by a skillful dairywoman, without other thermometer than a little of the cream taken on the finger and touched to her forehead. Experience has proved, that such a stroke of the churn-dash as will bring the butter in about thirty minutes, makes the best butter. At a temperature of about sixty-two degrees Fahrenheit, from fifty to sixty strokes of the dash per minute will accomplish this result, if care is taken to strike the top of the cream and the bottom of the churn at every stroke. If the churn be filled, so that the dash cannot strike the top of the cream, the operation can scarcely be accomplished at all. Rapid churning should be avoided at the commencement, though the motion may be accelerated after the cream curdles with butter. The butter, when sufficiently gathered by churning, should be transferred with a wooden ladle to a wooden bowl.

Lemon Pudding and Cakes.

Messrs. Editors—I send you a very nice recipe for lemon pudding, which I received from an excellent little housekeeper in New-York city. It is to be eaten cold without any sauce.

Two large lemons
One pound of loaf sugar, or light brown sugar will do very well.
Four ounces of butter.
One pint of cream or milk.
Eight eggs.
Grate the rind of the lemon.
Squeeze all the juice.

Mix the butter and sugar thoroughly together—beat the eggs well, and add the juice the last thing—a little salt. Bake three-quarters of an hour in a moderate oven.

A Very nice Breakfast or Tea Cake.

Half a cup of butter. } Stirred together.
Quarter cup of sugar. }
One cup of milk.
Half a pint of flour.
Two eggs.
Two teaspoonfuls of cream tartar.
One teaspoonful of soda—a little salt.

Sugar Cookies.

Three cups of sugar.
Two cups of butter.
Three Eggs.
Four tablespoonfuls of sour cream.
One teaspoonful of saleratus. M. H. K. *Auburn.*

New Strawberry Beds.

It is a great mistake to continue to cumber the ground with old strawberry plantations, producing about two-thirds of a crop or less of half sized fruit, when a new plantation may be secured with so little cost of time or money. A bed carefully prepared and planted at this time with strong runners, will bear a partial crop the ensuing summer, and a full crop the year after. We would not retain a bed over three years.

Many farmers have not the energy to plow up an old weedy patch of some worthless variety, which has degenerated still lower by bad cultivation, lest a few dollars should be required to secure two or three hundred plants of a well tested and profitable variety, such as the "Albany." On inquiry we frequently find that persons of judgment in others matters, really retain unknown varieties, occupying ground merely because they found them there, such sorts as Cushing, Extra Red, Crimson Cone, and varieties even worse than these.

Ground, where a crop of potatoes has been taken off, will suit well for a strawberry plantation; let it be thoroughly plowed and harrowed, remove all weeds, turn in a good supply of prepared compost, such as we have before advised should be held in requisition for such purposes, and plant in rows three feet apart, plants nine inches in the rows. Some planters would give a wider row, but we do not wish to frighten our more economical readers. At this season the best practice is to draw a deep rut with the hoe, and set the plant in it; this serves to shade its roots somewhat from the sun, till it recovers transplanting.

All plants removed at this season, should have a few of the outside leaves trimmed off, and the roots immersed in a mixture of clay and barn-yard manure, as we do with cabbage plants. If an opportunity offers to plant immediately before rain, this may be unnecessary, as some object to it, that it mats the fibres and prevents them from spreading so readily in the soil. It is a very good plan to water them thoroughly before setting out the plants.

If we say plant the "Albany," we only repeat the general cry, but we would add Hovey's Seedling, Burr's Pine and Early Scarlet, to the one variety in a plantation of any reasonable extent. S.

Preserving Fruits for Winter.

For three years past we have tried drying rhubarb, but are not pleased with our experiments. We cut it in pieces about an inch long, and either string it or place on dishes near the stove. There is no difficulty in drying it, but as the stalks are composed principally of water, (about 90 per ct. I should think,) it loses so much by drying that no soaking can afterwards restore it to its original taste or consistence. Last year we canned it with perfect success, thus retaining all the flavor and juices, and having it at all times fresh and ready for use. This will be found a *cheaper* mode of preserving it than drying, and it is certainly much better.

I think it far better to can all such fruits as peaches, plums, cherries, gooseberries, currants, blackberries, strawberries, tomatoes, &c., than to dry them, as drying must injure more or less the flavor of the fruit. And, after a supply of cans is once obtained, the cost of putting up is trifling, and with care the cans will last a lifetime.

For very acid fruits, as pie-plant, gooseberries, currants, &c., glass, stone or queens-ware jars are preferable, but tin cans answer well for many sorts, and are not liable to break, and also by contracting as the fruit cools after sealing, shows whether the atmosphere is perfectly excluded.

If every family in the land had a daily supply of canned fruits, what an immense auxiliary to the health and happiness of community it would prove! the effect being to improve and cheapen the diet. I doubt whether there is a locality anywhere in America, where cannot be found fruit of some sort, either native or cultivated, that may be turned to valuable account in this way.

Among cultivated fruits in this section, none can be cheaper, more likely to "hit," or in my opinion more healthy for use in warm weather, than rhubarb or pie-plant; and the best single variety of this is beyond question the Linnæus, which is more productive than any other variety, starting early in spring, and if the season is favorable, growing till late in the fall, while the flavor is superior to any other known sort. Downing's Colossal is very nearly as good, but is not productive here until midsummer, which is too late for profitable marketing.

I have about a ton of stems of Linnæus now growing, and would be glad to know whether *it will pay* to manufacture it into wine.

I saw an apparatus lately for extracting the air from cans of fruit by burning alcohol at the mouth, thus obviating the necessity of cooking the fruit, or of changing its natural appearance or taste. It is being tested this year on strawberries, raspberries, &c. Grapes are very easily preserved all winter, by packing when thoroughly ripe in a barrel, with kiln-dried sawdust between the layers of grapes; keeping the barrels in a dry cellar, secure from frost. E. Y. TEAS. *Richmond, Ind.*

Cure for a Felon.

Make a thin mortar of soap and lime—take a thimble with a top to it, fill it with the mortar, and place it directly over the part afflicted—bind it on so as to exclude the air, and renew it once in two or three hours till it eats through the skin. After that apply a poultice made of flax seed and Indian meal, till the inflammation has subsided. Then dress it with a salve of white pine turpentine, mutton tallow and beeswax, equal parts. E. J.

How to Improve the Stream of Milk.

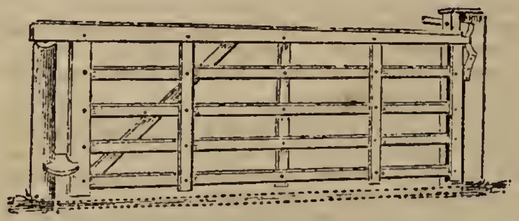
I have a valuadle cow four years old—no fault with her but a very hard milker. I wish to inquire if you know a remedy, and if so, let us know through THE CULTIVATOR, and very much oblige JOHN CARTER. *Leominster, Mass.*

Another correspondent—Berkshire—makes an inquiry similar to the above. In looking over the past volumes of the Co. GENT., we find an inquiry of the same character, answered by different correspondents in the same way. The reply there given is to take a small sharp pointed penknife in one hand, grasp the teat firmly in the other, and by a quick, steady motion insert the blade an inch or more into the orifice through which the milk passes. Those who have tried this, have pronounced it a certain cure, and will seldom need repeating.

Reaping vs. Cradling.

MESSRS. EDTORS—To show the superiority of reaping machines over cradles, I will give you a case on my neighbor's farm (Mr. Swan's.) He had eighteen acres of very heavy wheat, very much lodged. He thought, and I thought it would be impossible to cut it with the machine, and he let it by the acre to be cut by cradles or scythes as best it could be done. The cradlers had often cradled for me, and I knew them to be as good as I ever saw. Well they went at it, and worked some four days, making very little progress; and although they were to have $3.50 per acre for cutting and binding, they could not make anything like wages. After they had worked 3 or 4 days, and six men of them, Mr. Swan saw that it would be lost, or part of it, before they could cut it, and put in his machine—one of Burral's—setting it as low as he could; and he cut it very well—far better than the cradlers could do; and although he could cut it only one way—could not go round a piece—I have no doubt he cut all of nine acres in one and a half days. The cradlers declared they never would cradle any more as long as a machine was to be got. They said they had always been prejudiced against them—thought they had only been useful on light grain, but now they had got their eyes opened, and if ever they took such another job they would have a pair of horses and a reaper.

For the benefit of Mr. CLIZBE, Mr. BUNDY, and farmers like them, I will state that I have a 40 acre field, that ten years ago I never could get mown for less than $45, with board, and often more—(when in clover much more) Now it is generally cut in three and a half days by one man and a pair of horses, with a machine. Now these advocates for man machines may figure out how much I save by the machine, besides saving time. Our machine has cut over 70 acres this season without any repair. JOHN JOHNSTON. *Geneva, July 27.*



Dr. Robinson's Farm Gate.

The accompanying figures represent a farm gate constructed by Dr. D. A. Robinson of Union Springs, which for strength, durability, and cheapness, combined, we have not seen equalled. It is not given as an original invention, but as an excellent combination which he has effected of the various contrivances he has occasionally met with, and which we think forms an admirable whole. There are other gates more perfect than this, but none that we have seen equal to it for the same cost of construction.

It may be made of any light, tough and durable wood, but answers a good purpose when made of pine, with the upright or cross-bars of white oak. The upper horizontal bar is 11 feet long, 3 inches wide horizontally, and 5 inches deep at the hinge, and 2½ at the latch. Its mortises are only two-thirds through, to shut out rain, and 5-8ths by 3 inches—except of the heel-piece it is an inch and a quarter. The heel-piece is 3 by 5 inches, and the four lower bars are boards 1 by 5 inches. The cross-bars, the brace, and the two pieces forming the head-post, are 1 by 3 inches. They are secured at each crossing by wrought or annealed nails. The head-piece consists merely of two boards, nailed on each side of the horizontal boards. All the stuff forming the frame of the gate proper being 3 inches wide, may be sawed with little waste from the log; and the top bar by sawing alternately, for the taper. The gate is four feet high.

An important advantage is the protection of every mortise, and of the hinge and latch from the weather. The hinge is made by driving an iron rod, at least three-fourths of an inch in diameter, into the top of the post, (fig. 1,) which turns in a hole seven-eighths of an inch, bored two-thirds of the distance through the large end of the upper bar. A short iron plug driven into this hole, makes a hard resting point that will not wear, for the gate to turn upon. Fig. 2 shows the wooden collar which fits the round post and completes the hinge.

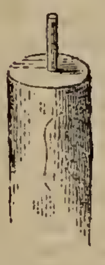


Fig. 1.

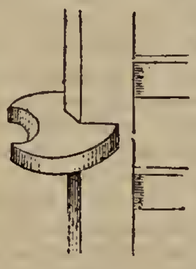


Fig. 2.

The latch being fastened to the fixed post at the head, and not to the gate itself, may be made stouter and more durable, and the gate not being encumbered with it, is less liable to be injured or broken, and swings lighter and freer on the hinges. The end of the bar itself, (*a*, fig. 3,) with the massive latch *b*, (the latter only rising as the gate shuts, and dropping again to secure it,) constitute a very strong fastening. The inclined plane *c*, which is faced with thick sheet-tin, (figs. 3 and 4,) is added only to facilitate fastening when the gate sags, as all wooden gates will, but this less than others, *because there is no weight whatever straining the hinges, except while the gate is open.* A pin or spike is driven into the post on which the hinges turn, just above the lower hinge, to prevent hogs or other animals from lifting the gate, and which does not prevent it from being placed on its hinges while open. The post holding the latch may be rough except the face; and the other may be rounded only where the hinge turns.

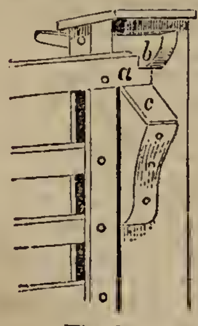


Fig. 3.

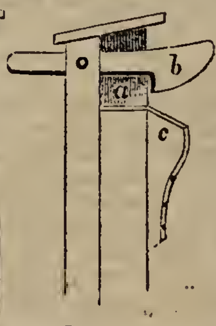


Fig. 4.

The whole cost of the hinges need not exceed ten cents, and the gate itself may be made at no greater expense than a common set of bars.

Dr. Robinson has furnished us the following account of the mode he has adopted for setting and hanging this gate:

In setting the gate, after digging the holes, prepare the post for the reception of the gate by driving in the iron pin or bolt at the top, and rounding that part of it where the lower hinge or collar is to turn; then put it to its place in the hole, but before securing in its place, hang the gate to it, and block it up in the position in which it is to remain. Then fill in the earth around the post and beat it hard, giving the post at the same time the proper lean in the opposite direction in which it is to swing—by observing this rule, the outer end of the gate when open to a right angle, should raise 8 or 10 inches from a direct horizontal line. This carries the gate more easily over snow-drifts in winter, or any other obstruction, and will shut of itself when passed a little from the right angle. In setting the other or head post, observe to give it the same angle of the one the gate is hung to, that it may strike the banger evenly when it is shut.

◆

Beautiful Sample of Wheat.

Near Geneva, 10th Aug., 1859.

Messrs. Editors—I send you a sample of Soules' wheat, cleaned for seed. I am sending the same kind to Indiana, and to Jefferson Co., in this State. It is the kind that don't produce chess, unless chess is previously in the soil. Yours truly, John Johnston.

P. S.—Our yield of wheat must be very large, but I will weigh it all, and then I shall know. It is a wonderfully fine crop We have thrashed 39 acres, but I must not tell how much the yield is until I weigh it, least the tally in measuring may not be correct. J. J.

The wheat sent is indeed a fine sample. The kernels are large and plump, and it would be a good sight to see grain growing which produces such beautiful wheat as this, which our friend and correspondent has forwarded us.

◆

Flowering of Potatoes.—Dr. Manby, an eminen English agriculturist, and the author of a Prize Essay on the cultivation of Early Potatoes, says in that essay, which has recently been published, that "a flower to an early potato is considered a sign of deterioration, the first symptom of *growing out*, it being contended that all the strength of the plant should be thrown into perfecting the tuber, and not into the opposite extreme." He would therefore eradicate them as soon as they appear, and save seed from plants which have shown no indication of flowering. Experiments have shown that potato plants beginning to show a tendency to flower, perfect their tubers less early and perfectly than before that tendency was developed.

Foreign Editorial Correspondence.

The IXth letter of our associate is devoted to the description of the celebrated Nursery of THOS. RIVERS, Saubridgeworth, England, and an account of Mr. JONAS WEBB's annual Ram Letting. From this letter, published in the COUNTRY GENTLEMAN, we make the following extracts:

Mr. Rivers' Nursery.

LONDON, JULY 11, 1859.

My last letter ended with the Show at Ipswich. Then follow an examination of the establishment of Messrs. RANSOMES & SIMS; a day or two passed upon the extensive farms of Mr. CRISP, whose stock I wrote about, and another, spent, under the kind guidance of the Hon. Col. HOOD, in looking over the four thousand acres farmed near Windsor, by his Royal Highness PRINCE ALBERT. Of these three instructive as well as very interesting visits, I defer speaking for the present.

Leaving London on the very warm afternoon of the sixth of July, I discovered that on my way to Mr. JONAS WEBB's noted Ram Letting, I might devote a little while to the extensive nurseries of THOS. RIVERS Reaching Sawbridgeworth station in about an hour, and after a walk across the fields, through an old churchyard, past a company of cricket players, and, at last, a short distance upon the turnpike, I easily guessed that I was near my destination from the bank still blooming with roses which overhung the last part of the way. For a hundred and forty years, father and son in succession, four generations, have been building up the high reputation deserved by long-tried integrity of management, to which there is now also added the distinction of the present Mr. Rivers for wide horticultural knowledge, and a pen useful to the public.

The grounds occupy a hundred acres, and are devoted to the usual variety of nursery productions, especial pre-eminence being given however to Roses. The days of summer roses have sadly waned, and the tide of general favor runs strongly with those which keep their blooms in this climate with general constancy, from June until November. In former times there were nominally some two thousand of the summer varieties; now Mr. Rivers only catalogues about a hundred, together with fifteen or twenty climbers, although he has more if they are called for. The growing of climbing roses upon tall standards was novel to me, although not new here; some of them thus form beautiful pendulous trees, or they may be budded upon stout stems two or three feet in height and the shoots suffered to rest upon the ground, when the result will be a dome shaped mass of flowers in the blooming season. Fortune's Yellow makes a free blooming climber upon a wall with any other than a northern or north-easterly aspect, and as a half-standard is converted into a fine lawn tree, the unusual color of its flowers rendering it at once attractive. * * *

When we come to fruits we shall find that Mr. Rivers, like our own largest nurserymen, has an extensive assortment of specimen bearing trees. His collection of pears at one time included *one thousand varieties;* several hundred of them he has, on trial, rooted out, and he still finds it necessary to apologize a little for the large number his Catalogue still enumerates. In growing pears of any kind, he has found a "black moor earth," taken from low situations near brooks and rivers, very useful; not in an unprepared state, however, but with an eighth part of unslacked lime spread over and mixed in with it, when, after five or six weeks, it becomes an excellent compost, and may be applied alone, or to a barrowful of it, a half-bushel of burnt earth and an equal quantity of rotted manure may be added, and one barrowful of the mixture applied to each tree. He presses strongly the importance of root-pruning, to ensure success in pear culture, either on its own root or on the quince; this he accomplishes by taking up the tree and replanting it early in November every alternate autumn--digging a trench around the tree 15 inches from its stem, and lifting it carefully from the ground with all the earth possible still attached; cutting off straggling roots, and, if the soil is rich, putting two or three inches of it into the hole before the tree is replaced, so as to prevent its settling—if the soil is not so rich, substituting, to answer this purpose, a little of the compost I have just described, or well rotted dung, not less than six months old. Mr. Rivers trains both apples and pears to grow as garden bushes as well as pyramidal dwarfs. He is also adopting what I understood to be an entirely new system, that is keeping the pear to a single stem of perhaps six feet in height, and pinching off the shoots so that the fruit spurs next to the stem are the ones left to bear. This will, he thinks, become a popular way, as it economizes space, and the fruit is all well ripened and easily gathered.

Pears, as well as apples and plums, and particularly peaches, are largely grown here as espaliers, trained upon walls, or upon stakes and railings along the garden walks; sometimes they are also seen trained upon a horizontal frame. Mr. Rivers has a cheap method of accomplishing a double purpose; tall stakes, perhaps ten or twelve feet high, are connected by rails along near the top; these trellises take the place of walls, are much cheaper, and besides an apple or pear may grow quite well on the northern side, while the southern is taken for a peach or apricot. The collection of apples includes three hundred and sixty varieties; that of cherries upwards of two hundred; of peaches, our Early York was mentioned to me particularly as being considered a most valuable acquisition. I was shown some plum trees, of a seedling variety, in boxes with *ripe fruit,* not forced by any heat, and only sheltered when in bloom, by putting them one or two nights out of the danger of frost—a remarkable instance of early ripening. American strawberries don't seem to succeed well as travellers to other countries. The Lawton blackberry is not regarded much, if at all, superior in quality to the ordinary sort here, but it ripens earlier.

The soil of Mr. R.'s nursery varies from a light calcareous sand to a stiff loamy clay. The cultivation is exceedingly clean. It was a great pity, however, to see no pears at all, and very few apples, on so many trees—fruit is generally this season an entire failure, or nearly so, in England, and those of us at home who know how to export good apples properly, and who happen to have nice ones to dispose of, will doubtless be able to find a ready market for them at remunerative prices.

I was pleased with a cheap form of running up buildings, particularly intended for cold houses, although quite as useful for heated ones Perhaps I cannot describe it clearly, but the whole is very simple. One now building, as an orchard house, for example, is sixty feet long and fourteen wide. There are side timbers erected in the ground, four feet apart, and four feet high—the corner ones six inches by four, and the others only five by three. Then a sill is nailed upon the top, three inches by two; the rafters extend from this to the ridge board (the house is span roof), and are twenty inches apart, and three inches vertically, by one and a half in width, with half-inch rebates nailed on the top, into which the glass is set. The sides of the house are furnished with a lid or shutter, to open, up and down, on hinges, a foot or eighteen inches wide, as may be required, while the rest of the span may be glazed above, and boarded below this opening. A two minutes examination of the house would tell better than a long article how to build it, but I thought it to combine more simplicity and cheapness, with neatness and durability, than anything I have seen. The cost of one building a hundred feet long, was only £48, less than $250, while lumber is much more expensive than with us, I believe. I should add, that for additional strength, every third post has a spur extending deep into the ground, and on every third pair of rafters, there is nailed a simple iron tie, to bind them more firmly together. All the glass used in his extensive establishment, Mr. Rivers has in panes twenty inches long,—

preferring this length, which is adapted to the uniform distance between the rafters, to any other; the breadth may vary or not, and is a matter of no consequence.

Mr. Webb's South-Downs and Short-Horns.

Let us retrace our steps a little way, however, or rather permit the train to do so for us; and, six or eight miles London-ward, we shall come to Babraham, home of the South-Down, where, king of a kingly flock, Mr. Webb this day dispenses the royal blood to all who buy, and solid English hospitality to all who come. At a table in the house perhaps twenty guests are seating themselves as we draw up before the door, to cold beef and ham in large abundance, with ale and wine, and the staff of life, and butter that may be of Durham extraction. As each finishes the luncheon, others seat themselves, and, for several hours, beginning before 11 o'clock, those waiters shall not lack the custom of some hungry visitant tooth. The host himself is missing, and missed; in a private apartment he has been some days occupied with the unwelcome presence of that grim guest, the gout,—and he is hoping while so many others are about him, the least agreeable of all of whom would be a relief in comparison with this which "sticketh closer than a brother"—he is hoping yet to shake off the intruder for a while, and to see his South-Downs off for 1859, as in the thirty-two years that have gone before.

In the interval, until the bidding begins, we shall have an opportunity to see the Short-Horns, of which there are 30 or 40 head at this farm, and perhaps twice as many more on one or two others, for Mr. Webb farms in all about 1,300 acres of land, only a hundred of them being in pasture and the rest under the plow. Two bulls there are in one stable; "Young Duke of Cambridge," now between three and four years old, whose sire was the old Duke of the same name, and whose dam, "Daffy Gwynne," of the Princess tribe, we shall by and by admire not less for her beautiful head than for the size and symmetry that characterizes her throughout. The Young Duke is excellent in his fore-quarters, particularly, and we turn with interest to see if he is equalled by his companion. This is a bull sired by the "Marquis of Bute," out of the "Countess of Hardwicke," and is scarcely three years old; his name is "Earl of Hardwicke," and he is a sample of Mr. Webb's breeding, doing no discredit to it. With great length of body he combines fine depth and girth in front; the loin comes well up to the hip, and he is very low in the flank, and long from the hip to the tail. He unites in his sire the blood, if I am not mistaken, of both the Fawsley and Lord Spencer's herds, with that in his dam of Mr. Bates' famous stock. * * *

Mr. Webb gave me a sketch of his herd and its rise and progress, from which I learn that it was first commenced in 1837, since which time it has grown upon his hands until the whole now numbers no less than 140 head. His chief design was, that they should convert straw into manure for his extensive farms—a purpose that renders good feeding requisite. The calves are taken from their dams, and allowed but little milk; all that I saw were coming on well, while their seniors were generally in the best condition,—those intended for exhibition being so particularly rotund, that I am sure some of our advocates for exhibiting only store animals, would have been almost thrown into apoplexy at the sight. I ought to defer speaking of this, however, until after the Warwick meeting, for I doubt if they were any better fed than all their competitors will be, and I am besides assured that "forcing and training for shows," is no part of their owner's plan. We have seen that there are strains of the Spencer, Fawsley and Bates blood among them, and these have been added, from time to time, to several other strains, so that six tribes are included in all. The "Duchess of Gloucester" is a cow for which three hundred guineas has been twice refused. "May Duke" and "Sir Charles," are two young bulls, which I ought not to forget to mention; the dam of the former I have spoken of, and the latter, as well, is of especial merit, and affords great promise for the future.

But we must be making our way to the ring, which is the central point to-day, and we are glad to find that our host has been able to post himself here to superintend, as usual, the course of affairs. The rams, of which about a hundred and thirty are on exhibition, have each a number affixed on either slope of his broad back, and are ranged along for the admiration of the curious, and the scrutiny of the customer. There are lists posted up in sight, giving the age and amount of the last clip of each, together with that important item, the price at which his services are offered to the Agricultural public. An attendant told me that Mr. Webb has about fifteen hundred breeding ewes, and a thousand lambs, and as there are among them five distinct tribes, he never has to go beyond his own resources to secure a change of blood. The ram lambs within a fortnight after they see the light, are examined, in order to select about two hundred of the best of them, to be retained as breeders. Mr. Webb will not sell a ewe in England, but disposes of some to foreign countries, and will not retain in his flock any that do not shear their seven pounds of wool as yearlings. The majority of the fleeces are said to be a pound heavier than this, and among the heaviest carcases that have gone to the butcher, some have reached fifty pounds per quarter.

Of the rams which have been most noted, there is one now five years old, for the use of which during three successive years, 410 guineas in all have been paid, or an average of about $700 a year—a pretty good revenue some of us would think, to get out of any single animal other than a race horse. But there is another which Mr. W. kept for his own use for two years—in order to do so, refusing a thousand dollar offer for its annual services. And 360 guineas was even offered by one person for a year's use of three rams—an offer that was not accepted—and in 1856, at the time of the great Paris Exposition, the Emperor presented Mr. Webb with a testimonial of plate, thus not only expressing his appreciation of the sheep, as he has often done by purchase and hire, but also in witness to the eminent achievements of their breeder.

One gentleman was present from New South Wales, Australia, who had been buying no less than seven Short-Horn bulls, a heifer, and several sheep, from Mr Webb's stock. The ram referred to as having been purchased by an American, was called "Young Salisbury," was sired by the prize ram at the Salisbury Show, and was bought by Samuel Thorne, of Dutchess county. Meeting Mr. Stafford since then, he informs me that he shipped at the same time with Mr. Thorne's ram, no less than 30 head of South-Downs for R. A. Alexander of Kentucky, comprising 6 from Mr. Webb, and the remainder made up in about equal proportions from several others of the most distinguished flocks in England. He also mentioned, by the way, having lately made a shipment of five Short-Horns to J. O. Sheldon of Geneva, and he added that he had never known a more brisk demand for improved stock than exists at this time.

The three points most sought by Mr. Webb, as a breeder of South-Downs, have been, I believe, weight, early maturity, and hardiness of constitution, combined, of course, with symmetry and some regard to the production of wool. He has met with most flattering success, and although, of late years, other flocks have arisen, perhaps equally worthy of public confidence, he still retains in a great measure the pre-eminence acquired by his early example of improvement. We saw, after the letting was over, a field of three hundred ewes, which for general excellence and some instances of rare merit, were most remarkable. * * *

In the evening, while it was still light, I had the pleasure of accompanying John Claydon, Esq., for a day's visit to his farm near Saffron Walden—my notes about which I shall have to retain until the shows are over, with much else, the interest of which will *keep* well. Returning thence to London, I passed Saturday at Rothampstead Hall, the fine old residence of J. B. Lawes, Esq., widely known as having conducted what are doubtless the most extensive, as well as the most expensive, field experiments ever undertaken, and to whose generous munificence in good works, his neighborhood affords as good testimony as the records of English agriculture do to his labors in this great cause.

Warwick Meeting of the Royal Ag. Society.

The following are extracts from Letter X., giving an account of the annual show of the Royal Ag. Society of England:

With its central position, almost equi-distant from Liverpool, Hull, London, and Bristol; with the fine country of which it consists, and by which it is surrounded, Warwick possesses great advantages of location, and it is not surprising that the exhibition here should rank, as I think it undoubtedly does, somewhat at least in advance of any of its predecessors. Implements particularly are shown in wonderful numbers. In stock I understand that all the classes are considered to be *well* represented, while in some of them the competition is very large and close. Of cattle, the Short-Horns, as *cattle*-ogued, number 163; the Herefords, 89; the Devons, 45; and other "established breeds," a class intended I believe mainly for milking or dairy stock, 23. Of horses, there are 79 "for Agricultural Purposes;" 33 dray-horses, and 38 others, including hunters and hacks. Of sheep, there are 93 lots of Leicesters, 59 of South-Downs, 73 of Long-wooled sheep other than Leicesters, and 122 of Short-wooled other than South-Downs—the last and fullest class being that which comprises the Downs of Hampshire, Shropshire, Oxfordshire, and the West Country. I see but two or three Merinos on the list, and they are also put down under this last class. Of swine, there are 39 lots of a "Large Breed," and 69 of a "Small Breed." Beside the above, which are in competition for the Society's prizes, there are quite a large number of special prizes offered by the Warwick local committee; 10 bulls compete for three premiums on bulls calved during the year 1858; there are 17 entries of "pairs of cows in milk or in calf;" 8 of "pairs of heifers in milk or in calf;" 8 of "pairs of yearling heifers;" and quite a show of the pure Long-Horn breed, including half-a-dozen bulls, and as many pairs of cows. Under the local prizes 56 horses and ponies also compete, in addition to those already mentioned; and there is a class of Shropshire sheep by themselves, including no less than 78 lots, and another of Berkshire pigs, of which there are 36 lots. There are next a few other swine, and then a list of prizes for wool, divided into classes for different breeds, and limited, if I understand rightly the word "teg," to the first fleece taken from the sheep when a yearling. Lastly come some cheese prizes, and this finishes a catalogue of 95 pages in length.

Far more bulky yet is the one which enumerates the implements 450 pages being required to contain a list of the 4,000 on exhibition. There are 245 stands or exhibitors, each of whom shows from one, all the way up, to several scores or hundreds of articles. I remember noticing a stand with articles numbered up to 200; I do not know whether there were any larger lists or not. Implements appertaining to the cultivation of the soil, such as plows, harrows, cultivators, rollers and clod crushers, together with tile and brick machines, and draining machines and tools, were the ones to be tried this year, and a prize of fifty sovereigns was also offered for the best application of steam to the culture of the ground.

Trial of Steam Plows and Cultivators.

As long ago as last Friday, operations began—a trial field having been staked off early in the afternoon for the steam cultivators. Fowler's and Smith's engines, also one not as widely known, Romain's, were located here, on ground described as "excessively hard, from the dry, hot weather," although not what would be called a very heavy soil. "From all appearances it cannot have been disturbed for some years." The last of these appears to have broken down at the end of its first furrow. Its inventor is from Canada, and his machine is a kind of locomotive, carrying behind it a revolving cylinder, upon which spades or cutters break up the soil in a width of eight feet, and so to any desired depth, by turning in a direction opposite to that of the engine, as it moves forward.

On Saturday the other machines above mentioned, with one or two more, were got under way. But Fowler and Smith have brought their engines into a much more perfect state than any of their competitors, and it seemed to be taken for granted that the prize lay between them. Fowler's plowing was a little complained of, as not being well laid, but the condition of the ground was perhaps some excuse. The pace at which it was done was about three miles per hour, and the width of furrow twenty-eight to thirty inches. It will be remembered that the main difference between this machine and Smith's is, that Fowler *combines the windlass*, which drags the plow along the field, *and the steam engine together;* while, on the other hand, Smith uses a *separate windlass*, which any portable engine can turn. Smith, however, does not *plow;* he has a kind of "smashing" process,—I think because he prefers it, for I can see no reason why he should not draw a plow as well as he does a cultivator of any kind. He does not appear to have done quite as well on Saturday as was anticipated; the difficulty being that his "steam-cultivator" left the ground in some places unbroken, so that it would require cross cultivation to be thoroughly done. This I thought to be the case when I saw it at work at Ipswich.

Cultivators, harrows and plows were also partially tried on Saturday.

On Monday, it is said that both the Fowler and Smith engines "passed through a severe test," and accomplished very difficult work.

The result of the day's trial was that these two machines, together with a third, were chosen for a final trial—the third being that of Chandler & Oliver, an engine and windlass combined. In its construction, the drums on which the rope is coiled, are placed on either side the engine, between the fire box and traveling wheels, and are driven by gearing from the fly-wheel shaft. A balance plow is used, making three furrows, and, in operation, the rope that draws it runs along the ground in the form of a triangle—its base being the line of the furrow, while its sides constantly diminish as the work goes forward.

It will be seen from what has been said, that the system of dragging the plow by wire ropes up and down the field, the engine itself not going upon the plowed ground, and only moving along the headland as necessity requires, is the one that seems most likely to succeed—Boydell's and other inventions which act as locomotives, being regarded as too cumbersome and difficult of management. Their weight upon the land is also one of the greatest objections, especially on heavy soils. The price of the Smith machine, without an engine, and adapted for one of 8-horse power, is £205; that of Fowler's 8-horse power is £455 10*s*, of his 10 horse power, £622. There are about fifty sets of the former, (Smith's) it is said, now in use by tenant farmers —a fact which, with some others here given, I may possibly have referred to in my letter from Ipswich, although, having no copy, I cannot tell.

Tuesday the Implement Show-yard was open to the public, comprising thirty-two large sheds, ranged side by side at convenient distances, and the open space adjoining them occupied by engines working the various machinery which was to be shown in actual operation. The exhibitors of implements go to great expense in bringing large collections, and they fit up private offices in their stands, where in many instances they keep a luncheon always ready for the benefit of their host of friends. And when they have also to enter an extensive lot of implements or large and complicated machinery upon trial, the cost to them must be very much increased. One of the competitors, though probably one of the largest, told me that the exhibiting expenses with him would amount to about £1,000. This shows how highly they esteem such a Show as a medium of advertising. They also expect to do a good stroke of business upon the ground. I noticed several farmers giving orders, and a gentleman informed me that the largest houses sometimes sell during the days of the meeting, four or five thousand pounds worth of their manufactures.

Trial of Mowing Machines.

Tuesday, moreover, the field trial proceeded, including scarifiers and plows. There was also a trial of mowing machines, in which two of the three contestants were American machines, viz., Wood's and Allen's, and the other the invention of an English patentee named Harwood. I saw Wood's in operation upon Prince Albert's farm at Windsor, in a very unfavorable field of soft and considerably matted grass, when, as might be expected, it could not cut as closely as it otherwise might, and since then I have seen one or two gentlemen who have used it largely, and to their entire satisfaction. Allen's seems to be a decided success, so far as I can learn—many who have seen it in operation, preferring it to all others yet introduced.

Draining by Steam.

Friday Morning, *July* 15.

Among other machinery tried on Tuesday, was Fowler's Draining Plow. It is the same, I think, which was brought forward several years ago, but formed to require greater power to operate it than that of any ordinary team. Now that steam is being applied to draft-work on the field, it is thought that this means of laying tile may be more successfully and economically employed. The agent of the manufacturers assured me that they were willing to undertake, by contract, the draining of any land, and to perform their work to the entire satisfaction of the owner. As the reader may remember, a cutter cuts its way through the ground, say three feet below the surface, and a mole at its point leaves behind it, as the machine proceeds, a tubular hole, into which, at the same time, it draws the pipe tile used here almost exclusively in place of the *horse shoe*, and other shapes in vogue with us—these pipe tile being strung upon a rope for the purpose of pulling them into place under ground. The exhibitors also showed a windlass of their own patenting, for the purpose of operating the Draining Machine with the aid of any portable steam engine.

Warwick was gaily decorated on Tuesday, as it was the opening day to the public. The price of admission (to the implement-yard only) was half-a-crown, say 63 cents, and about 1,700 persons, according to the published statements availed themselves of the opportunity to contribute this sum to the Society's treasury. In the afternoon were announced the implement prizes, Messrs. Hornsby & Sons, Ransome & Sims, J. & F. Howard, and other names less familiar across the water, being prominent among the prize-takers for plows, harrows and cultivators, Fowler getting the £50 for his steam apparatus, and the Messrs. Eddingtons £15 for the Fowler draining plow and windlass, referred to in the last paragraph, of which they are manufacturers. Burgess & Key had a silver medal for Allen's Mower.

On Wednesday morning, the implements were open to the public at the same price, and, shortly after one o'clock, the judges on stock having all completed their labors, that part of the show was opened at an additional charge of $1.25, so that those who were admitted that afternoon had paid altogether nearly two dollars for both branches of the exhibition. I mention this particularly, as a proof how many there are in this country who do not grudge the expenditure of five or ten shillings sterling on such an occasion, perhaps not merely for the sight of the show itself, but knowing as they do that they are thus placing additional means of usefulness in the hands of the Society, and willing and glad so to contribute to its prosperity. I have somewhere seen a statement of the number who paid for admission to the stock-yard this day, but cannot now find it. I was a little surprised that there was so many, and was inclined to wish that our societies at home might receive more of such liberal support.

On entering this part of the grounds we found the prizes already posted above the fortunate animals, and each surrounded by crowds of admirers or critics. But I must close for the present, with the view of writing again, in season for the next steamer after the one which carries this, and perhaps in time to add the remainder of my imperfect account to this hasty beginning. I may add, however, that yesterday was a fine day; 19,900 visitors entered the grounds—the account being accurately kept by a kind of turn-stile, that registers of itself every person who passes. Wednesday there were 8,530 admissions. The arrangements are generally good, and the existence of catalogues, and the stands for the sale of them in all parts of the grounds, are a very great convenience. The weather could not have been more glorious, although verging in heat somewhat upon the temperature of one of our own Julys.

Norfolk Farming—Holkham.

Norwich, July 18, 1859.

Since I wrote before I have been looking at some of the famous Norfolk farming, and I shall hope as time may permit hereafter, to give you some idea of what I have seen. It is a county noted for light lands and heavy crops; donkeys and fat cattle; drained fens and blowing sands; a poor soil and high improvement; plenty of game but little breeding; the cleanness of its culture, the extent of its wheat fields and the numbers of its flocks. If I could tell you now all that I have learned in visiting C. S. Read, Esq., near this place—the author of several prize essays, published in the Royal Ag. Society's Journal—Mr. Fulcher, the active and intelligent steward of Lord Sandes; the farms of John Hudson and his son, the noted Castle Acre agriculturists, and, last but not least, Robert Leeds, Esq., who is one of the most enterprising and thoroughgoing specimens of the English tenant-farmer I have yet had the pleasure of meeting,—you would understand still better the pre-eminence Norfolk enjoys among the best farmed counties in the kingdom. I had not a day to spare to visit the home grounds of the Holkham estate, owned by the Earl of Leicester. You will at once remember that it was the father of the present Earl, who, under the name of Mr. Coke, as well as afterwards under his later title, accomplished so much for agricultural improvement, and paid so much attention to the Devon breed of cattle. The Patterson stock with us, was obtained from this source. I came as near to it as this: twenty-four miles drive, all of it *through this property*, would have taken me to the Hall. The revenue which such a district of farming land yields to its proprietor, is of course beyond any idea of riches to which we have yet attained, even from the successful manufacture of patent medicines, or the more sterling pursuits of commercial life; I heard various estimates of it, ranging from sixty to eighty thousand pounds, that is to say, *from three to four hundred thousand dollars a year*. If any reader is inclined to sympathize with his lordship in the condition of penury represented by these little figures, I might add that he has other very extensive property, so that one might suppose there would be, in his case, less difficulty in contriving how to raise the money he wants to spend, than in accomplishing the expenditure of the income he enjoys.

Mr. Sanday's Ram-Letting.

Lincoln, England, July 21.

Yesterday I was present at the Letting of Leicester tups at Holme Pierrepont, near Nottingham, and I take an odd moment to give you a part of the result—a part only, for the train forced me to leave before the whole was quite concluded. This farm has been noted under its present occupant, Mr. SANDAY, as well as under his predecessor, Mr. BURGESS, many years for its Leicester blood, and correspondingly high prices have been paid for the use of rams from a flock so deservedly distinguished. This year there were offered 28 shearlings, 19 two-shears, 8 three, 5 four, and 3 five-shears. Of the first 28, six were passed, (not let,) and the remaining 22 brought 721 guineas, being *an average per head* of £34 8*s*. Of the 2-shears, 9 were not let, and the other 10 realized 286 guineas, or a fraction over £30 each. At the time I left, 3 only of the 3-shears had been let, two at 50 guineas each and one for 12 guineas. There were two others, one a shearling (20) and the other a 2-shear (11) let for the same sum, and several more approached it. There were only three let for more than 50 guineas (say $250) each—No. 27 shearling for *ninety*, No. 26 for *seventy*, and No. 19, 2-shear, for *sixty one*. Mr. TORR of Aylesby, near Grimsby in this county, with whom I came away from Holme Pierrepont and have been spending the day, was the the taker of the 70 guinea ram, in preference from its larger size, I think, to the one that was let for 90. The latter took the 2d and the former the 3d prize at the Warwick show.

Farming in Lincolnshire.

The following extract are from Letter XI, dated

BOSTON, LINCOLNSHIRE, July 25.

In the train on the way thither, I had some conversation with a Lincolnshire farmer, whose "occupation" was situated some miles to the westward of my destination. He gave me a number of interesting facts in relation to his pursuit, and the general system of the neighborhood. He farms 850 acres, and it is this year employed about as follows :

170 acres of wheat,	30 acres of oats,
150 acres of barley,	160 turnips and mangolds.

340 in "seeds," *i e*, clovers, &c., &c.

The "shift" or rotation, as would be inferred from this division of the land, is five-course, that is, the land is kept two years in clover, ray-grass, &c.—a crop of mixed "seeds" which is called here by that name exclusively, and in which clover always predominates when the land is not "clover sick." The wheat is followed by roots, the roots by oats or barley, these grains by the two years of mowing or feeding, and then comes around again the wheat. Mr. A. feeds a hundred bullocks and about a thousand sheep; this year indeed he clipped over 1200 fleeces, and seemed a little proud, too, of the fact. Such is the animal machinery by which production must be maintained—the feeding which supplies the midland cities of Manchester and Leeds, with beef and mutton, and enables northern Lincolnshire to send them also quantities of wheat as well as to furnish Burton with the vast weight of barley she annually malts and brews.

The wool of the Leicester and other similar breeds has been an important item in farm receipts of late. Mr. A. thought his flock had averaged a yield of about eight pounds weight throughout, and the price obtained had been from twenty to twenty-two pence per pound, say about 40 cents. He had hired a ram or two of Mr. SANDAY, and had been a bidder at a high rato on others.

I think it was with this gentleman that I spoke particularly of tho practice which some of us have advocated and others decried so strongly—that of spreading the manure upon the wheat-lands sometime before plowing up tho stubble of the clover crop, and permitting it to remain in exposure. There are many in this country, at any rate, who constantly practice this way to advantage, as I am assured, and consider that, in no other, can greater benefit be obtained. It helps, in some extent too, to bring forward the "seeds," so that when they are ready to plow a few weeks later, there is a closer and thicker sward to turn over, which will of course yield the greater nourishment it has thus been accumulating, to the coming crop of grain.

Mr. Torr's Farming—Aylesby Hall.

The land occupied by Mr. TORR, in looking over which I spent the next day, varies considerably in character, but is generally rather strong, underlaid by clay or chalk, and capable of yielding quite remarkable crops under good management. The system followed is, generally speaking, the four course shift, although Mr. T. does not bind himself to it, and varies it by occasionally putting some fields in wheat that would naturally come under a barley crop, thus increasing the area covered by the former, without ever taking two white crops in succession.

Upon his land he finds that to manure for the wheat causes frequently too much luxuriance of growth, and he consequently prefers to manure mainly or entirely for the root crop. Not only is the immense bulk of straw which he converts into fertilizing wealth, thus employed, but he also spends liberally for oil-cake, guano and superphosphates—buying to a great extent, in lieu of the two latter, a kind of "blood manure," which seems to be now in quite general esteem—and his bill, he told me, for the past year for these materials was in the neighborhood of $10,000, (£2,000)

The wool he clipped this spring, however, would have sufficed to cover no immaterial proportion of this large sum, for he sheared no less than two thousand sheep. The extent of business incurred in the management of such a farm, may also be estimated from the disposition of the land and the crops it returns. There are about 500 acres in permanent grass, and the other 1600 are divided into wheat 500, barley 250, oats 100, roots 415, and seeds 335. Last year the wheat crop was a very good one, and averaged throughout this large surface nearly 40 bushels per acre; Mr. T. estimates his average, bad years with good, not far below this figure—perhaps at 36 or 38, while he considers the average of all Lincolnshire as varying from 30 to 32. Two adjoining fields of his best wheat aggregating 67 acres, averaged, all through, full 48 bushels, and of the barley there were 28 acres which produced 183 quarters, that is six and a half (52 bushels) to each.

Mr. T. annually shears about the number of sheep mentioned above, but they do not comprise his whole flock at this time, which included about a thousand breeding ewes, the same number each of yearlings and of lambs, and perhaps a hundred tups. He is to have his Annual Show and Letting on the 7th of September, and will probably reduce his stock before winter about to the usual numbers. Having so much land in permanent grass, he is enabled to graze through the summer to almost any desired extent. He generally disposes of about 400 fat sheep per year, and the rest of those he breeds are sold I presume to other breeders who require them, or some perhaps to other farmers simply for feeding purposes. In the summer he also grazes a few bullocks, but does not feed beasts to any extent in winter, because generally his Short-Horn herd is large enough to consume, with the sheep, all the hay and straw he has to give them.

The mode of applying the manure to the turnips, is to open a furrow where each row is to grow; in this the "muck" or farm-yard manure is thrown, and, upon it, from one and a half to two cwt. to the acre of guano; after a covering of earth has been turned over this with the plow, the seed is drilled—the machine dropping at the same time with it, from four to eight bushels of ground bones per acre as the case is thought to require, mixed to a bulk of about 24 bushels per acre with sod ashes. These sod ashes or charred earth, play a most important part in Lincolnshire agriculture, and appear to be in almost universal use upon the root crop, whatever other applications it may or may not receive. Between 50 and 60 tons of guano were used last year, at a cost of £12 to £14 per ton; and 330 quarters (8 bushels each) of bones ground, I was given to understand, to what is called the half-inch size, and costing about £1 per quarter.

The cost of labor in the country generally, is about two shillings sterling per day; the men who care for the horses are taken under a different way from other laborers, and are generally what is called "confined" hands; perhaps they have a cottage furnished, and receive a further part of their wages in kind,—altogether, at any rate, getting a considerably higher sum than others, partly because their services are necessary, more or less, all seven days in the week, and partly because they occupy a position of more responsibility. One such man is engaged to every four horses, and if my memory serves me, there are employed upon the place forty or fifty horses—it may be rather above the latter figure even.

Mr. T.'s land, with probably the sole exception of the "Riby farm," is situated similarly to, if not actually included in what is called the "fen district"—a district not requiring here the machinery of wind-mills and steam to effect its drainage, as it does on some parts lying lowest and nearest the sea; but much the better for a judicious under ground dressing of pipe tile. Indeed, my host looked upon the introduction of *deep* drainage as one of the greatest agricultural improvements the last few years have seen; while in early times of draining, two feet and a half was considered ample, four feet is now reached wherever circumstances admit, and Mr. T. has on one of his farms about three hundred acres, all underlaid at this depth, at a cost of about fifteen hundred pounds sterling. It is such fen lands, when well drained and properly managed, that will return, in a fair season, the largest wheat crops compatible with standing straw—they may be allowed to get into such a condition that the straw will never stand and, of course, the great end is to hit that medium which runs between too great luxuriance of growth and too little fertilizing material to admit of the fullest and thickest heads of grain. Two hundred weight of salt per acre may be applied to strengthen the straw, and if thought best, one and a half hundred weight of guano or if the land will bear it, two hundred weight of guano and a proportionably larger amount of salt—either put in at the time of seeding in autumn, or sometimes sown broadcast in spring.

I do not know that I have as yet spoken of that feature in English farming, which is so universally praised, and which forms such an important item in the cost of production—I mean, the often almost entire cleanness of the soil from weeds. I do not refer to it here, because I saw in Lincolnshire any cleaner fields than in some other counties. It is this which gives rise to the frequent comparison of the farms of England to the garden-cultivation of other countries. To see fifty or a hundred acres in a field of turnips, or twenty or thirty in mangolds, each separate plant as long as it is young, with as clear a space of well worked soil around it as if there was no other in the field, and when it grows old enough for its leaves to meet those of its neighbors in the rows around, covering over all the land with an unbroken shelter of its own this is the perfection of farming, because it accomplishes on a large surface all that could be done on a little plot, and, if not always attained in fact, is certainly more nearly approached by the English farmer than by any other. He will undertake any labor that may be necessary to get the field rid of every vestige of the intruders upon its riches, before he sows his seeds. Particularly are the roots of the *quack*—that most pestilent and long-lived of evil grasses, carefully raked out and burned. After the young plants appear, the horse-hoe and grubber are freely used. As soon as they reach a more advanced stage, they are "set out" by the hand-hoe, and here again any odd burglar that may have effected a secret entrance may be at once despatched. This "setting out" consists in one stroke of the hoe-blade, which may be eight inches wide, across the row, leaving a tuft of several plants at every interval; a gang of children generally following to single out all but the strongest one. Much care is taken to single the mangolds completely, but with turnips many go no further than the first operation, not objecting to allow a number of the plants to remain together. The wheat is often horse-hoed, either in fall or spring, and frequently just before earing out, children go through it to pull every stray stalk that don't belong there, and spud out the thistles.

Cattle and Sheep.

Mr. Torr's predecessor at Aylesby Manor, was Philip Skipworth, who established the flock of Leicestershire sheep, having obtained some Dishley bred ewes, it is said; and, about 1810 or 1812, such was the fame of this highly improved breed—having given the extravagant price of 600 guineas for the use of a single ram—an awful figure indeed, but exceeded by the combination of four of his neighbors to make up a thousand guineas for the hire of another ram "of the same sort." It is now about 70 years since the flock was commenced, and its breeders have successively manifested a similar determination not to be outdone in securing the best, and as constantly exercised their own judgment in preventing its deterioration. The farm came into Mr. Torr's hands in 1848. This year at Holme Pierrepont he was the hirer of the 70 guinea ram, the only one which went higher having been taken to Ireland. As we stroll from paddock to paddock where the rams are grazing, we shall find that they are generally a little larger in frame than the Sanday flock, as though the air of Lincolnshire, or perhaps a touch in the foundation blood three or four score years ago, had brought them a little nearer to the style of sheep indigenous to the country. The sheep of Lincolnshire as they now exist, are doubtless almost universally tinged with Leicester blood, and this in a greater degree I observed on the low than on the high lands—the latter preferring to adhere more to the old type, and inclined to think it the only one at all suited to their wants.

As to Short Horns, Mr. Torr is entitled to precedence for extent of herd, while he has not many rivals in its character. He numbers at present 120 females, and 26 bulls, young and old. He is disposed to swear by Mr. Booth, in all Short-Horn matters, and thinks the cow "Bracelet," and bull "Duke of Northumberland," never surpassed in all the pedigreed members of this now widely-spread breed. There is a noticeable proportion of handsome roans in this herd, and not a few of them fully able to back their color with all desirable style and substance. It is fifteen years since Mr. T. began, in 1844, to hire exclusively from Warlaby; paying for the services of the bulls from 60 up to 200 guineas each, and including among them "Leonard," "Baron Warlaby," "Vanguard," and other good stock-getters. The last was in use for seven seasons, and forty or fifty out of the hundred and eighty calves he bred, still bear witness to their parentage. A half dozen of noble bovine matrons are left among the best fruits of the Warlaby blood, their sire having been the "Baron" of that ilk. Indeed, of all the cows and heifers, there are but eleven which don't trace back their origin to Booth bulls, and not one of them not included in the trio mentioned above. "Hopewell," by name, is the father of a tribe of twenty or thirty daughters, and several particularly nice young sons. Take, as an example of the latter, his breeder's especial pride, "Booth Royal" and "Golden Hope," both fourteen months old, and "Gay Hope," still younger, his blood particularly precious to the initiated in geneological mysteries, for in it are mingled that of a whole quartet of Boothian bulls.

The Royal Irish Agricultural Show.

Dublin, July 29.

I have only time to add by way of postscript, that this show has duly taken place at Dundalk, a seaport town of some 10,000 inhabitants, a little more than fifty miles northwardly. The exhibition of Short-Horns included, as I expected, some very good stock. Other breeds were not largely represented—with the exception of a small Hereford display. Sheep and swine were limited in numbers, but fair—especially the Long Wooled sheep. There was not a large show of horses. That of Implements was extensive and good. I will write soon with more particulars. but this must take the mail immediately. L. H. T.

Inquiries and Answers.

Grafting and Budding Grapes.—Having purchased some vines last spring (1858) which have turned out wild ones, would it be advisable to bud on them a good variety? If so, please explain process. Should it be done on last season's wood or on the old stock, and what season of the year? Old Long Island. [The grape is usually propagated by grafting—which is done in spring immediately after the leaves begin to expand, the grafts having been cut before the commencement of growth. On account of the furrowed surface of the shoots or stems, and the want of the accumulation of cambium, buds do not succeed well.]

Guano on Clay and Sandy Soils.—Almost all experiments with Peruvian guano in this vicinity, are failures on clay soils, while those on sandy loam, or lands very sandy, are successful and yield good crops. Can you or any of your numerous correspondents, explain the reason? Jas. Childs. *Deerfield, Mass.*

Chinese Sugar-Cane Syrup.—I noticed an inquiry in your paper some time since, as to whether molasses made from the Chinese sugar-cane would keep good through the summer weather. Not having seen any answer to the above, I will state that we have some on hand which was made last fall, which is as good as when first made, showing no signs of souring or spoiling any way. I am certain that if properly made, it will keep through the hottest summer weather. We made about two hundred gallons of excellent molasses. If it would be acceptable, we will furnish you with our method of making, for the benefit of your readers. Irene Cole. *Flowerville, Ind.* [Your directions for making the syrup, will be very acceptable.]

Manufacture of Vinegar.—I wish to know if any of your correspondents can give me any information to prevent flies from boring through barrels that are in the hot sun full of vinegar? Can any paint be made up with any article, in which to prevent them? I wish to know how to make a cement to put around the heads of barrels, to prevent leaking, and the best article to make cider made of molasses turn to vinegar in two or three weeks time. M. D. Miller. *Athens Co*

Raising Grass Seed.—Will you in your next issue of the "Country Gentleman," inform me how to secure grass seed. The grass seed of the shops, in my case, "turns up," as a general thing, *weeds*. We think we are very poor farmers, though abundantly green, no doubt, in one sense of the word. A. L. Milbank. *Northampton, Mass* [Select such meadow (usually best when rather new) as affords the grass without weeds; allow the seed to become nearly ripe—it will ripen somewhat after cut—when thoroughly dry, thrash it, and pass it through a good fanning mill. A good and suitable screen will separate the chaff, &c., and deposite the seed in the box.]

Wheat and Chess.—Having read with interest the various investigations in reference to wheat turning to chess, and being a firm disbeliever in such transmutation, my faith has been somewhat staggered this evening, by being shown a head of wheat, bearing both wheat and chess, having all the appearance of being firmly attached. The chess has sprouted and grew out from the wheat near the lower part of the head, and appears to be as much a part of it, as any of the grains of wheat composing the same. The gentleman who has shown it to me, wishes to claim the $500 reward offered for evidence of the transmutation of wheat to chess, and believing that the sample before us now comes nearer a demonstration of that propositoin than anything that has ever been produced, wishes to know through your kindness, more particularly how to proceed in the matter. Will you be so kind as to inform me in reference to the reward, and the necessary evidence to obtain it, if it is still offered, and by whom it is offered. Enos Hoover. *Frankfort, Ind* [We are sorry to disappoint our friends about the $500; but if they will take the trouble to examine their head of wheat carefully, they will see by bending down the chaff directly under the chess, that the chess did not grow out of the wheat head, and that there is no actual connection between the wheat and the chess, the latter being held in its place only by the pressure of the wheat upon it. We have seen a number of such heads, and it never took over a minute to convince those who presented them to us, that the chess did not grow on the wheat plant.]

Saving Animal Manure.—Will you please inform me through the columns of The Cultivator, the best method of reducing animal substances to manure. This is a subject which interests every farmer of the middle and eastern states. On every farm almost there is more or less loss in rich materials, which should be turned to a good account in enriching our soil. Every farmer is liable to the loss of cattle, sheep and hogs; those carcasses should be turned to a better account than burying them in the ground merely to get them out of sight. J. D. *Forestville. N. Y* [If the dead animals are buried well, on the surface of the ground, by heaping over them turf, loam, or peat, this covering material will become very rich in the course of a year or two, the flesh in the mean time entirely disappearing by absorption; this process would be much hastened if the carcass were previously divided into parts. The enriched earth may then be directly applied as manure, or worked into compost with barn manure.]

Seeding Knolls to Grass.—I would like to ask you if you have a recipe for a salve which shall hasten the formation of a "cuticle," and even a beautiful crop of green "hair," upon the hitherto bald heads of my pasture knolls, made so by the merciless scalping knife of its former owners. My handiest ingredients are muck, *ad libitum*—manure, *un parvo*—gas lime—salt, *quantum sufficet*—labor, &c. Joseph A. Stuart. *Dracut, Mass.* [Our surgical friend does not inform us the extent of the injury—whether the turf only has been pared off the knolls, as the comparison to scalping would indicate, or whether all the fertile soil has been removed, leaving nothing but sterile subsoil. In the former case apply a compost of muck and manure this fall, and sow and harrow in grass seed very early next spring, at the rate of a bushel per acre, or three or four times the common quantity. This will make the grass grow as thick as hair. If there is only a sterile subsoil, apply more muck, with some manure, and work these partly into the soil by plowing, and next spring sow as before.]

Artesian Wells.—What apparatus is requisite to bore an Artesian well? What is the probable cost per 100 feet? Does it require a scientific man to oversee the operation, or can any man of good judgment and common skill guide the works? Is it probable that water may be obtained at any depth on the summit of one of the highest hills on Long Island? A. W. Day. *Deer Park, L. I* [Will some of our correspondents please answer the above by giving the practical details?]

Hessian Fly.—Inclosed you will find six or eight insects, that are destroying considerable of my winter wheat, by eating off the stem near the roots. I have found four or five at work around a single stalk. The wheat prematurely severed from the root, falls to the ground or lodges on the surrounding stalks. Besides the damage done the grain, it will make the work of harvesting the remainder very unpleasant If you can inform me of their habits, name, and whether or not they are something new to shorten the farmer's harvests, you will oblige Ira E. Sherman. *Delaware Co, N. Y.* [The insect is the Hessian Fly; the specimens sent being in the "flax seed" or proper state. The best remedy is to burn the stubble, and give high cultivation, as stout crops will best withstand the attacks of this insect.]

Chip-Manure.—To what special purpose, and in what manner can it be most profitably applied? Will it answer to add it to the manure heap, or first to reduce it to ashes? An answer will oblige Tyro. [Chip-manure, unless very fine, should be allowed to rot in a moist heap—it may then be applied to the compost heap. It is useful for heavy land in rendering the soil more loose—and to any soil deficient in vegetable matter. To be useful, it must be well worked with the soil. It would not be best to burn to ashes, except for soil largely supplied with vegetable mould.]

Bone Manure.—What shall I do with my bones? Being in the retail meat business I can save a considerable quantity of bones, and buy any quantity at a low price, which I would like to make into superphosphate, if I can do it so that the article will be worth transportation to Massachusetts—cost, say, $8 per ton. Are they most most valuable charred or burnt only, or dissolved raw? I propose to mix with the bones, charcoal dust leached with urine, instead of guano. What would be the value of an article made in this way, compared with the best kind in market; and on what crops, and what kind of soil would it be most beneficial? Would spoiled meat mixed with charcoal dust, make a compost worth transportation at a cost of $8 per ton? F. S. Barlow. *Newark, N J.* [We are unable to state the actual cost of superphosphate of lime, made by dissolving crushed bones in dilute sulphuric acid, according to the process which we have occasionally described in former volumes, and including the labor—but as the best made article is considered worth some $50 a ton, the manure would probably be worth transportation and manufacture. It is better not to burn the bones as the heat expels a part of the valuable matter. The proposed additions would be good, and add to the value, and it would be probably about equal to the best in market, *if well manufactured*, all the bones well dissolved, &c. Spoiled meat mixed with charcoal would make a valuable manure, worth more than the cost of transportation.]

Disease in Cows.—I have a three year old heifer, in milk a year, in high condition, which is affected mostly on the neck and head, with the hair coming off in round spots, half to an inch in diameter. The spots are whitish, dry and scaly. What is the name and remedy for this, and is it contagious, as another of same age is beginning to exhibit the same? An answer to the above from some of your readers will greatly oblige. J. A. *Waterbury, Conn.* [This may be a modified form of mange—if so, it is contagious. We have had no experience with the disease, but are told the best treatment is to curry off the scurf, and then apply a mixture of lard and sulphur.]

Fruit Culture.—I want to go into the fruit-raising business—live 75 miles from St. Louis, on the line of a railroad. Will you be kind enough to inform me, whether I could make it profitable living at that distance from a good market? If so, what kinds of fruit would you recommend or advise planting? Please answer through the The Cultivator. Subscriber. [Proximity to large cities give fruit-raisers the advantage of a market for early and perishable fruits, such strawberries, raspberries, peaches, &c. These fruits are sometimes sent greater distances to market on good railroads, but the extra packing, cost of conveyance, &c., are drawbacks. The less perishable fruits, as apples and pears, are easily sent long distances. We cannot speak with confidence of the sorts which may do best in that region, as experience in each locality may give different results, although all the small summer fruits will unquestionably succeed, and some varieties of pears, peaches and apples—but more experience is wanted as to which will be most profitable there.]

Egyptian Grass.—Enclosed I send you a sample of grass which I have found growing in several door-yards in this vicinity. It seems to be a good, permanent lawn grass, forming a thick dark green mat, and continuing green almost the entire year. It has not been affected by the recent dry weather, while blue grass has been considerably dried up. It is now just in blossom—has from two to four seed prongs at the top of the seed-stalks as you observe, with a unique, pretty appearance. It is said to be highly relished by stock of all kinds. It is not described in any work that I have. Do you know its name, or anything of its qualities? L. D. Morse. *Allenton, Mo* [This grass is *Dactyloctenium Egyptiacum*, (the Chloris mucronata of Michaux,) and is supposed to be an introduced plant. It is described by Gray. We are not acquainted with its value for a crop]

Canary Grass.—Our correspondent at Otego, N. Y., is also informed that the grass sent is the *Phalaris canariensis*, or Canary grass, which comes up from the scattered grains used in feeding canary birds, and is thus becoming naturalized.

Old and New Grass Seed.—Do you think red grass seed of last year's growth, would vegetate about as well as that of this year's growth, if sown this fall? If so, I should prefer it, because of its larger, plumper seed, the season this year being very dry. C. [We have never found two year seed equal to freshly raised, and if the new is well ripened, would prefer it in value. Our correspondent would do well to try the experiment, by taking say 100 seed of each, and sowing them in rich mellow soil in boxes, half an inch deep, and keeping constantly moist and *shaded*. A few days will determine the relative value. The experiment will be worth more than its cost, and if reported and published, would be interesting to many readers.]

Muskrats.—In the Country Gentleman, July 21, 1859, I. C. inquires, "what is the best way to stop muskrats from cutting off corn?" Insert double tape safety-fuse into their places of abode, and fire one end; as soon as fired stop up the hole, and the muskrats will think the "devil" is not 30 feet from there and leave. A Reader of the Co. Gent.

Canada Thistles.—I notice an inquiry as to when is the best time to cut thistles and alders to kill them. My recipe is as follows: Cut or plow them the three days before full moon in June, or the three days next previous to the last quarter in August. The reason given for its killing them is, that the sun and moon are in opposition. Not being troubled with alders, I have never tried it on them, but there will be but very few thistles grow after cutting them. H. G. W. *Fleming, Cayuga Co., N. Y.*

Disease in Swine.—In the Country Gentleman of Aug. 4, I notice that "A Practical Farmer" complains of a disease among swine, &c. It may possibly be not generally known that there are holes in the fore legs of a hog, and that one or both holes will sometimes become filled up with a kind of glutinous matter, caused probably by keeping the hog too long in the pen. Judging from the description your correspondent gives of the disease he speaks of, I should think that and the one I have reference to, were the same. A knitting-needle, or any similar instrument, run in the holes to open them, will perform a cure; the hog will die if this is not done. J. *Hudson, N. Y.*

Annual Register.—Have you the Annual Register, all the numbers bound in one or two volumes, and at what price? P. B. C. *Amelia C. H., Va.* [We have issued a new edition of the first three numbers under the title of "Rural Affairs,"—price $1, post-paid by mail—and it is our intention to issue a similar volume every third year hereafter.]

Acorns for Hogs.—Why is it that after hogs are fed on acorns for weeks, they will not gain any for about as many weeks after being put upon corn? I have killed hogs from the woods, when their inwards were completely black. This no doubt is caused from the stringent nature of acorns. Can any of your subscribers tell what would be good to feed porkers, before put on grain. Wolverine.

☞ Can you or any of your subscribers, inform me how to plant the hickory nuts to cultivate the plants for hoop-poles? I have heard of its being done, yet I never saw them cultivated. A. W. Day.

Notices of Exhibitions.

N. Y. **STATE FAIR.**—In a brief paragraph a few weeks ago, we called attention to the progress of the preparations being made for the forthcoming State Agricultural Exhibition near this city, and we believe the importance of and interest in the subject will justify further notice at this time. The fair is to be held above this place, on the Troy road, on the same ground where it was when the state exhibition took place here several years ago. The location is a very fine one, and in every way all will be done that can be, to render it pleasant and agreeable. The railroads and steamboats will, as usual, carry free all articles designed for exhibition at the fair. In the August number of the Journal of the Society, Secretary JOHNSON says: "From the evidences before us, we are warranted in saying that the approaching Fair will be one of the best the society has held. Not only from our own state, but from the New England states, the exhibition promises to be larger than any held by the society." We hope our farmers will attend in large numbers, as the gathering will be a pleasant one; and the meetings for agricultural discussion will be productive of great good to those who can be present.

THE AMERICAN INSTITUTE.—The Institute, under the direction of an efficient Agricultural Board, are to hold a general agricultural exhibition, at Hamilton Park, 3d Avenue, on the 21st—24th days of Sept. Liberal premiums are offered for domestic animals of all kinds, implements and machinery, and $1,000 is appropriated for discretionary premiums for steam plows and other steam farm machinery, and it is hoped that Mr. Fawkes will be present with his steam plow. Great efforts, we are informed, are making to get up an exhibition worthy of the Institute and the country.

U. S. AGRICULTURAL FAIR.—The seventh annual exhibition of the United States Agricultural Society will take place at Cottage Grove, just south of the city limits of Chicago, Ill., commencing on Monday, September 12th, and continuing until Saturday, 17th. Twenty thousand dollars are offered in premiums, and competition is opened to the World. There are over forty acres of ground inclosed in the grove, containing one thousand tight-roofed stalls and pens, with six handsome and commodious halls, fifty by one hundred and fifty feet, and other accommodations of the most complete and ample description. For premium lists, and all information in regard to the fair, application should be made to the superintendent, HORACE CAPRON, at the Tremont House, Chicago, Ill.

VERMONT STATE FAIR.—The ninth annual exhibition of the State Agricultural Society of Vermont, will be held at Burlington, Sept. 13-16th. Arrangements have been made with railroads in the State, and also with steamboats on Lake Champlain, by which articles for the fair are to be carried free, and visitors at half fare each way. The exhibition promises to be a favorable one. HENRY S. MORSE, Superintendent.

In addition to this we learn that the Annual Address is to be delivered by Hon. N. P. BANKS, which will be on the third day of the Fair.

UNION AG. SOCIETY.—We have received from G. S. WALKER, a circular of the premiums to be awarded at the Union Ag. Society—formed by the towns of Lorraine, Adams and Rodman, in Jefferson county—to be held at Adams, N. Y., September 15th and 16th. Our thanks are presented for the liberal number of the Co. Gent. offered as prizes.

EXHIBITION OF HORSES.—An International Exhibition of thorough and native bred horses will be held at Buffalo, N. Y., September 6-10, at which time premiums of one thousand dollars will be awarded for the several classes usually given at such exhibitions. The arrangements are full and complete. A public sale of stock will take place on Saturday, 10th, the last day of the exhibition, by auction or otherwise. The treasurer will pay the premiums awarded, at the office on the grounds, at the close of the exhibition. All entries must be made in the name of the owners, previous to September 6th. The officers of the "International Association" are, President, C. J. WELLS; Secretary, WARREN GRANGER—who may be addressed at Buffalo. Competition is open to the United States and Canada.

BOURBON CO. (KY.) AG. SOCIETY.—We have received the circular and premium list of this Society, the twenty-fourth annual fair of which is to be held on the grounds of the Society, near Paris, Ky., Sept. 6-9th. B. J. CLAY, President; A. M. BROWN, Secretary.

Circular of St. Lawrence County Ag. Society. Eighth Annual Fair at Canton, Sept. 28—30.

Premium List of Queens County Agricultural Society. Fair at Hempstead, L. I. September 15th.

Circular of American Institute. Thirty-First Annual Fair at Palace Garden, New-York City. Will open Sept. 21 and be closed Oct. 28.

Christian County (Ky.) Agricultural and Mechanical Association's Premium List. Fair at Hopkinsville, October 12—15.

National and State Fairs for 1859.

UNITED STATES SOCIETY.

Exhibition, ...	Chicago, Ill.,---	September 12—17.
American Institute,	New-York, ...	Sept. 21—Oct. 28.
International Horse Fair,	Buffalo, N. Y.,	Sept. 6—10.
Nation'l Horse Fair,	Kalamazoo, Mich.,	October 11—14.

STATES.

Alabama, ...	Montgomery, ..	November 15—18.
Canada West,......	Kingston,......	September 27—30.
California,..........	Sacramento, ...	Sept'ber 27—Oct. 6.
Connecticut, ...	New Haven,...	October 11—14.
Georgia, ...	Atlanta, ...	October 24—28.
Illinois, ...	Freeport, ...	September 5—9.
Indiana, ...	New-Albany, ..	September 26—30.
Iowa,..............	Oskaloosa, ...	September 27—30.
Kentucky,.........	Lexington, ...	September 13—17.
Maine,.............	Augusta, ...	September 20—23.
Maryland, ...	Frederic City,.	October 25—28.
Michigan,..........	Dètroit,........	October 4—7.
Missouri, ...	St. Louis,......	Sept'ber 26—Oct. 1.
New Hampshire, ..	Dover,.........	October 5—7.
New-Jersey,.......	Elizabeth, ...	September 13—16.
New-York, ...	Albany, ...	October 4—7.
Nebraska Territory,	Nebraska City,	September 21—23.
Ohio, ...	Zanesville,.....	September 20—23.
Pennsylvania,......	Philadelphia, ..	September 27—30.
South Carolina,....	Columbia, ...	November 8—11.
Tennessee,.........	Nashville, ...	October 5—7.
Vermont,..........	Burlington, ...	September 13—16.
Wisconsin, ...	Milwaukie, ...	September 26—30.

Butter Making.

MESSRS. L. TUCKER & SON—Seeing in your valuable paper the COUNTRY GENTLEMAN considerable said about butter, I thought I would give a statement of my way of making it, for the benefit of your readers.

The milk stands about 36 hours, then skim and churn; then I draw off the milk and wash the butter in 3 or 4 waters, as it needs; then the butter and salt is weighed separately; three fourths of an ounce of salt to one pound of butter is then mixed with the hands, the same as you knead bread, until properly mixed, and then packed. I used to work the milk out, but found that I could make better butter by washing. Some say there is specks of dried milk in their butter; but there is no such thing as dried milk in butter—it is cream that lays next to the milk. It is never found in the cellar, but in the milk room when the air is too dry.

I always drain my butter-milk through a sieve in the spring, until I put it down cellar. I have churned from what is called white caps, from six to eight pounds of butter; but the best way is to put the dried cream with your next cream as you skim, which gives it a chance to soak To make good butter there must be care, and a good place to set your milk, and good water and feed for your cows. The best feed for butter is old pasture. I have a pasture that has been in pasture 30 years, and I always make my samples from this.

If health permits, I shall be at the State Fair with two samples, and ready for any question about butter that may be asked. IRA BROWN. *South Rutland, Jef. Co., N. Y.*

Western Fruits.

The rapid growth made by trees in summer, and the occasional intense cold of winter, throughout the great region of the west, renders it a matter of great importance to ascertain the hardiest varieties, or such as are best adapted to the climate. We have occasionally published lists furnished by the most intelligent cultivators in the western States, with a view to supply all the valuable information we can for our western readers. Having recently had some correspondence with several western fruit raisers on this subject, we furnish some extracts which we know will be acceptable to all those in search of informatiou in relation to hardy fruits.

Adnah Williams, of Galesburg, Ill, remarks—"On account of the diversity of soil in our State, arises a great difference of opinion among pomologists as to what varieties to cultivate For instance, one says, "Rambo, all killed;" another "not injured"—*both state facts*. One has been grown under such conditions as to ripen its wood, and is not injured by the variations of temperature or severe cold; the other has been under such other conditions that the wood is immature, soft, not ripe, and the effect of cold or vicissitudes, is death. The object to be attained on *our* prairie soil, (prairie soils vary greatly,) is RIPENED WOOD. How shall that be attained, is the question. The conditions under which a single cherry tree (Black Tartarian) has been grown on my place, are such that that tree is alive, but all others of that class (Heart or Bigarreau) are dead. Thousands of Northern Spy in nursery rows ('55 and '56) were killed to the ground; while other trees of the same variety in rows not one rod distant were uninjured; the only difference, the wood of one lot was ripened; the other unripe. Such soft wooded varieties as Baldwin, R Russett, Bullock's Pippin, &c., cannot well be grown here; their natural habit cannot be so much changed as to make it an object, even if there were no other objections."

He adds the following list of apples recommended by the Horticultural Society of that place, for general prairie cultivation: Early Harvest, Carolina Red June, Early Pennock, (culinary,) Summer Pearmain, Maiden's Blush, Rambo, Fameuse, Roman Stem, Yellow Bellflower, Jonathan, Tallman Sweeting, Wine Sap, Rawles' Janet, and Willow Twig.

The following list (which is very similar) is furnished by J. S. Sherman, of Rockford, Ill.:—*Summer*—Early Harvest, Carolina Red June, Hocking, Red Astrachan, Summer Queen, Sweet June *Autumn*—Autumn Swaar, Haskell Sweeting, Fameuse. *Winter*—Bellflower, Canada Reinette, Golden Russet, Red Romanite, Rawles' Janet, Winesap.

O. P. Rogers, (of the firm of Rogers, Woodward & Glass, Nurserymen,) of Marengo, Ill., says, "Of the *hardy* varieties tested by me, are Red Astrachans Red June, Sweet June, Benoni, Early Joe, St. Lawrence, Lowell, Fameuse, Tallman Sweeting, Jersey Black, Winesap, Yellow Bellflower, Golden Russet, Belmont, Swaar, Jonathan, and Westfield Seeknofurther. Of those *decidedly tender*, Rambo, Sweet Bough, Baldwin, Keswick Codlin, Domine, Jersey Sweet, and Green Sweet. Many of our fruit men preferred the English Golden with English Russet and Bullock" Pippin. The two latter are tender, the former quite hardy."

D Cook, of Jackson, Michigan, says: "The following varieties are found to be among the most hardy throughout this section, viz., Northern Spy, Yellow Bellflower, Goldent Russet, (not Am,) Tallman Sweet, Benoni, Red Astrachan, and Willow Twig.

J. T. Little, of Dixon, Illinois: "Wilson's Albany Strawberry promises finely; I had splendid berries on plants set out last spring; flavor not equal to that of McAvoy's Superior. Jenny's Seedling is remarkably productive; Hovey's unprofitable. Our principal crop is the Necked Pine, which does all we would ask plants to do."

A Large Pear Orchard.

The Rural New-Yorker gives an account of an extensive young orchard of standard pears, containing forty-five acres planted with nearly 5,000 trees, now in its second year of growth. It was planted by Starks & Mattison, of Monroe Co, N. Y., on a strong, fertile clay loam. The ground was prepared by subsoiling 18 inches deep, and the trees were planted twenty feet apart. Not a dozen out of the whole number have died. Winter mulching has been used for protecting the trees, consisting of yard manure, and a mound of earth around each tree, the manure being spread and spaded in the following spring, and the mound levelled. Every tree is staked, and the trunk of each from the ground to the branches, is covered with a loose cotton case to protect the bark from the heat of the sun. Many are making a growth of three or four feet this summer, and some are already bearing moderately. Among the sorts planted are 1,300 Virgalieu, 1,000 Bartlett, 370 Winkfield, 300 Diel, 300 Lawrence, 270 Seckel, 230 Louise Bonne of Jersey, 220 Flemish Beauty, aad smaller numbers of Sheldon, Rostiezer, Easter Beurre, Onondaga, Glout Morceau, Winter Nelis, &c.

Strawberries on Clay Grounds.

Messrs. Editors—I would like very much to have you give a little specific, plain direction how to proceed in the culture of the strawberry on clayey land that is very much inclined to be wet. Please begin with the very first steps, and proceed regularly up to cropping time, and please state the adaptability of clay ground to the cultivation of the strawberry, and oblige L. F. Dillaway. *Troy, Ohio.*

We have had some experience in planting strawberries on the kind of land alluded to. It is possible that such hardy sorts as the Large Early Scarlet and Wilson's Albany may succeed and bear on such soil as it now is, with a proper addition of manure. It would however, be far more certain of success, and the crops would be far better, if the same course was adopted that we pursued in our own experiment, namely, to underdrain thoroughly, and then to reduce the stiffness of the soil by carting on sand. A coating of two or three inches of sand, worked into the soil, effects a great improvement; and, unlike the application of manure, it remains for ages. After haviog brought the land to this excellent condition, set out the strawberry plants, (young plants, produced by runners the previous year,) in rows 20 inches apart, and 10 or 12 inches in the row. Keep them clean and well cultivated, like beans, and they will bear some the first year, and profusely the second, *if the best sorts are used.* If field culture is intended, set the rows two and a half or three feet apart, and cultivate with a horse.

Notes for the Month.

"An Editor's Farm."—Under this head we see transferred to the last *Rural New Yorker*, from an anonymous correspondent of a Yates county paper, a most disreputable attack upon our friend and associate John J. Thomas of Union Springs, Cayuga county, evidently intended to throw discredit upon Mr. Thomas as an agricultural writer, by representing him as a thriftless and unsuccessful farmer; and the editor of the Rural, we regret to see, endeavors to give additional force to the slander by some appended remarks in which exultation at the opportunity of copying so delicious a morsel, is far more transparent than the wit under which it is attempted to be concealed. To those who know Mr. Thomas, or who have visited his beautiful place at Union Springs, no refutation of the charge brought against him is necessary, but for the satisfaction of others we publish the following statement from some of Mr. T.'s neighbors:

J. J. Thomas's Farm.—A very erroneous statement having lately appeared in the Rural New-Yorker, in relation to the farm now occupied by our fellow-citizen J. J. Thomas, with a view to detract from his reputation as a successful cultivator as well as writer, we hereby certify that the statement alluded to is entirely false, and that his residence is one of the most beautiful in this part of the country, and his farm a very neat and productive one, in a high state of cultivation; and that during the short time he has occupied it, it has undergone great improvements, among which are some miles of tile-draining.

H. H. Farley, - Laban Hoskins,
Edward Eldridge, Wm. H. Chase.
Union Springs, August 5, 1859.

Rye Turning to Chess.—L. F. Scott of Bethlem, Ct., relates to us a case of rye turning to chess, as he believes; or if it is not thus transmuted, he wishes us to tell him where the chess came from. That chess comes from the seed of chess, is in accordance with the immutable laws of creation, a law which has never yet been abrogated by the sleight of man. But for us, up in New-York, to undertake to say where the weeds on every man's farm down in Connecticut, came from, would require rather more knowledge than even an "editor" is generally expected to possess. There are many ways in which the introduction of the seed might easily be accounted for, which we have repeatedly mentioned on former occasions. The case mentioned by our correspondent, where "simon-pure crook-neck squashes" gradually turned into "pumpkin squashes," is very different, the squash and pumpkin being scarcely distinct species, remarkable for the readiness with which they hybridize; but rye and chess are distinct genera, and were never known and never can hybridrize, much less make a clean leap from one to the other.

Ditching Machine.—We have previously stated in our columns, that the Illinois Central R. R. Co had offered a premium of one thousand dollars for the best steam plow, in addition to that of three thousand dollars by the Illinois State Ag. Society; and we now learn from a circular received from F. W. Biddle, Secretary, that at a meeting of the Executive Committee of the Illinois Central R. R. Co., held at Chicago, July 28, the following resolution was adopted:

Resolved, That the Illinois Central Railroad Company offer $500 for the best Ditching Machine for open ditching. The simplicity and economy of its construction, and its application to farm uses, must be such that it can successfully compete with manual labor;—the award to be made by the Executive Committee of the State Agricultural Society, in connection with three scientific machinists to be selected by that body. Before any party shall claim payment of said award, he shall exhibit the practical working of the machine at the same places and times with the Steam Plow which shall receive the award from the same Committee—the Illinois Central Railroad Company agreeing to transport said machine to and from such points free of expense to the owner.

Freak of Lightning.—The Cooperstown (Otsego Co., N. Y.,) Freeman's Journal of 28th July, contains the account of lightning striking an entire hop-yard, which consisted of three and a half acres of ground, destroying it at one flash. The vines of the yard are supported by strings attached to wires that run from posts on each side, and these are connected by cross wires, so that when the electric discharge fell upon a corner post, which it shivered, it ran over every wire, and down nearly all of the posts, as well as down many of the strings, and the climbing vines; in some instances tearing the roots out of the ground, and tearing from the seventy-eight posts that held the wires, a wagon load of kindling wood. The striking was witnessed by a woman, who distinctly saw the flash as it came down upon the first post, and flashed zig-zag across the plot on the wires. She describes it as a magnificent though terrific sight.

From Canada to California.—We learn that F. W. Stone, Esq., of Guelph, C. W., a well-known breeder of improved stock, has lately sold and sent to Albert Dibblee, Esq., San Francisco, California, ten pure Cotswold rams and six Cotswold ewes, five South-Down rams and three South-Down ewes, and one improved Leicester ram.

M. A. Cuming.—We notice the recent death of this able and experienced Veterinary Surgeon at St. Johns, N. B. He has contributed many valuable papers to various agricultural publications, and his loss will be severely felt in his own vicinity, and to the agricultural community. The Secretary of the Maine Board of Agriculture, writing to the Maine Farmer in regard to his death, says: "I consider his death a public loss, having rarely ever met a man of such extensive and thorough acquirement in his profession and all matters kindred to it. He was an accurate chemist, and was thoroughly at home in all matters pertaining to the theory and practice of Agriculture, and at the same time the plainest and most unassuming of men."

State Fair.—We learn that the work of preparing the ground on the Troy road, near this city, for the forthcoming State Fair, is progressing rapidly. Thirty of the fifty acres to be included in the grounds, are already fenced, and the buildings are being erected The land is also thoroughly drained. Hon. John A. Dix is to deliver the annual address; and meetings for the discussion of Agricultural topics, will be held in the Lecture Room of the Society every evening during the Fair.

The "Early May Wheat" of the present harvest is a greater success than ever. Cutting began June 12th, and this wheat was ground into flour on the 29th June; and some of our farmers who cultivated the common varieties, fed their men on bread from this wheat, whilst engaged in cutting the later ripening sorts. All varieties have done well here this year, except a part of the blue stem white, which proves to be under the lawful weight, sixty pounds. "The Early May" weighs, this year, sixty-four pounds to the bushel. For the information of all your readers north, who are addressing me through the mail daily, I will say this wheat can be purchased here in any quantities, just at the market price for any other good wheat. My own crop is sold and ground into flour, at $1.10 per bushel, and since wheat has fallen at Maysville, Ky., to $1. It is not likely to go any lower, as any thing under $1 checks sales. Supplies can be secured at from $1 to $1.10 per bushel, and two and a-half bushel sacks at 32 cts. each Maysville is on the Ohio river, with fine shipping facilities to any part of the union. I will receive orders *gratuitously*, and the only extra cost will be a shipping or forwarding fee of three cents per bushel, at Maysville. I have shipped several lots to Ohio and Pennsylvania, through the house of Messrs. Mitchell & Jenkins, of that city. Anthony Killgore.
Fernleaf, Ky.

Mediterranean Wheat.—I send you by express, a sample of my Mediterranean wheat, cleaned for seed. I think it the best of that kind of wheat I ever saw. will you please hand over the greater portion of it to my friend Col. Johnson, and tell him I hope he will put it in a handsome glass dish, and place it in the State Agricultural Rooms, with a card in it, telling where raised, and let it remain there uutil he gets a better sample sent him, *but no longer*. John Johnston. *Near Geneva.*

A portion of this beautiful sample of wheat has been deposited in the State Agricultural Rooms, and the other portion remains at our office. Those who wish to see a beautiful sample of this variety of wheat are invited to call at either place.

Soules Wheat.—There is a wonderful call for Soules wheat for seed. I suppose the farmers think the midges are all dead, but let me tell them they are neither dead nor have they *deserted*. The wheat came too early in ear for them this year. I have sent seed to Indiana, Kentucky, Pennsylvania, New-Jersey, and Connecticut, and to several in our own State, and my neighbors. John Johnston.

Wheat Midge Not Destroyed by Frost.—We frequently see the statement, or hear the remark, that the wheat midge was probably destroyed by the great frost. An observing farmer tells us that he never saw this insect more abundant than the present year, but that the wheat was in too forward a state to be injured by their attacks.

Three Rows of Potatoes.—An acquaintance at Pakenham showed us in his garden in July, three rows of potatoes. Row number one, with the smallest and shortest tops, was from a single eye gouged out. Row number two, which stood next—with better tops than number one—was from pieces cut, a single eye to each piece. Row number three, which had the longest and heaviest tops, and best growth, was from pieces cut in the usual way, with a number of eyes to each piece. All were healthy and doing well. We hope to hear how the crop will yield in weight when dug. Appearances decidedly favored number three. W. O. B.

☞ Mr. N. H. Noyes of Otisco, Onondaga Co., we learn has purchased 200 acres of our friend John Johnson's farm in Seneca county.

Killing Bark Lice.—O. P. Rogers, of Marengo, Illinois, says: "I use for wash to kill bark lice, one gallon soft soap, half a gallon of lye or water, heat to boiling, and add three-fourths of a pint of spirits of turpentine. Put on while warm with a paint brush."

English Beans for Feeding Stock.—Col B. P. Johnson, in a brief notice of a call on Mr. Wainwright of Dutchess Co., in the Society's *Journal*, says that Mr. W. has been raising English beans for feeding. His crop last year was successful, and this year it promises a very gratifying yield. If further experiment proves this product suited to our climate, we would second the recommendation to our farmers, "to give attention to this crop, as it is a valuable one, and may be found very useful in rotation."

Southwestern Missouri.—This is a fine stock country, and land is cheap, offering fine inducements to emigrants This is one of the best corn countries in the Mississippi Valley, with fine water—springs almost every where—with about an equal proportion of prairie and timber land. Coal, and that of the finest kind, such as pure cannel, as well as bituminous, in abundance. The soil is a black rich loam. Fruit succeeds here finely. Vines of every kind grow here in the most bountiful manner. This is the watermelon's seeming nativity; they are seen some falls in the sod land until long after frost; after the corn has been cut off the land, they seem to be so thick one could walk on them partly over the field, and so large you would not care to carry one of the largest far. J. A. P. *Morgan Co, Mo.*

Apple-Pie Melon, &c.—By what method shall I tell when the Apple-pie Melon is ripe or fit for use—also the "Chufas?" or earth almond. O. L. D.

ONTARIO GRAPEVINES.—The largest Native grape in America. Bunches large, berries enormous, 1¼ to 1½ inches in diameter. Flavor best. Large size plants now ready for delivery in pots, so as to set them out at any time in the season without checking their growth in the least. Price $5 00.

N. B—Also 135 other choice varieties for sale, cheap for cash.

A. W. POTTER & CO.,
Grapelawn Nurseries,
Aug. 25—w&m1t. Knowlesville, Orleans Co., N. Y

THOMAS & HERENDEEN'S NURSERIES,
at Macedon, Wayne Co., and at Union Springs, Cayuga Co., N. Y.,

Now occupy Eighty Acres closely planted with Trees, and contain an extensive collection of

APPLES—consisting of about forty of the finest select varieties.

PEACHES—affording a succession of the best sorts for two months.

CHERRIES—comprising all the well proved and valuable new kinds.

PEARS—Dwarfs and Standards, the best chosen varieties.

PLUMS—containing a full list of approved sorts.

Besides an ample supply of *Raspberries*, *Gooseberries*, *Currants*, *Strawberries*, and the smaller fruits generally.

Their trees are not only of vigorous, handsome, and healthy growth, but are propagated with great care to insure accuracy, and exclusively of such sorts as have been amply proved by fruiting—their list of Apples alone being selected from specimen orchards of several hundred varieties in bearing.

Their Ornamental Department contains the best

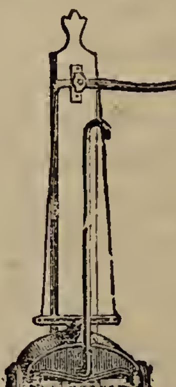
HARDY IMPORTED AND AMERICAN EVERGREENS,

Ornamental Trees, Shrubs, and Herbaceous Flowering Plants, &c.

All orders addressed to *Thomas & Herendeen, Macedon, Wayne Co., N. Y.*; or if for Standard Pears, to *J. J. Thomas, Union Springs, Cayuga Co.*, N. Y., will meet with careful and prompt attention, and packing will be performed in the most secure manner for safe conveyance to any part of the continent. In all cases where desired, selections will be made with scrupulous care by the proprietors. Aug. 25—weow3tm1t.

PORTABLE SAW MILLS—For sale at Agricultura Depot, 100 Murray St., New-York.
Sept. 1. HENRY F. DIBBLEE.

DOUBLE ACTING FORCE PUMP.



One of the newest and most useful inventions of the day is a Double Acting Force Pump, owned by Mr. James M. Edney, 147 Chambers-street, in this city. It is without packing, and without suction, is exceedingly simple in its construction, and, at the same time, possesses all the requirements of a good pump, and can be used either as a well, a cistern, or a ship's pump. It is not liable to get out of order, and has but one barrel and one piston, being without guide rods, slides, chains, or pulleys. So easily can it be worked, that any girl or boy ten years old can manage it without the least trouble at 60 or 70 feet, and under 30 feet the working power is scarcely perceptible. At the discharge pipe is a screw to which a hose pipe can be attached, and water can be thrown to a height of from 30 to 40 feet. It does not lose a drop of water, and has no extra appliances from one foot to one hundred feet. A model and pump can be seen at the office, 147 Chambers-street; but those who would witness it in full operation and judge for themselves of its remarkable properties, should go to the factory, 432 East Tenth-street, where a number of obliging attendants will take pleasure in showing and explaining its workings, and where the visitor can have an opportunity of handling and trying it at 20 and 65 feet. As a pump for attaching hose in case of sudden fire, either on shipboard or in the house, it will be found an invaluable adjunct. It works by hand, wind, water, and steam. Drawings and prices sent free.—*New-York Express.* Sept. 1—m1t.

FRUIT BOOKS.

BY THOMAS, BARRY, DOWNING, and others, for sale at the office of the Country Gent. and Cultivator

FIFTH ANNUAL CATALOGUE OF THOROUGH-BRED NORTH DEVON CATTLE.

The subscriber has just issued his Catalogue for 1859, containing full pedigrees of all the animals now composing his herd It will be forwarded on application to those desiring it.

C. S. WAINWRIGHT,
Aug. 25—w3tm2t. The Meadows, Rhinebeck, N. Y

THOROUGH BRED AYRSHIRES.—

The superior 3-year old Bull "Bruce"—also two or three 4-year old Heifers in calf, to calve this fall--bred from Imported Stock, but from entirely different families.

THOROUGH BRED NORTH DEVONS.

Calves, Heifers, Cows and Bulls of various ages, with Herd Book Pedigrees. Some of these animals are of superior merit, and will be sold on favorable terms. Address

ALFRED M. TREDWELL,
Aug. 25—w4tm1t. 45 Fulton-street, New-York.

THE SYRACUSE NURSERIES

OFFER FOR SALE FOR THE FALL OF 1859,

The Following Trees, Plants, &c.

Apple—3, 4 and 5 years old; a very general assortment. Dwarf; 2 years old, very fine.

Pear—1 and 2 years old; Dwarf and Standard, so extensive in variety as to enable us to fill the most particular order. Also, several choice varieties of bearing age.

Cherry—1 and 2 years old; Dwarf and Standard, beautiful Trees.

Peach, Apricot, Plum, and Nectarine—Best varieties; trees very vigorous.

Currants—White and Red Dutch, Victoria, and twelve newer varieties; quality of plants unsurpassable.

Gooseberries—Houghton's Seedling, a good stock, and some of the best English sorts.

Blackberries—Lawton or New Rochelle, Dorchester, and and Newman's Thornless.

Raspberries and Strawberries—Assortment especially large and desirable. Prices very low.

Grapes—An immense stock of Isabella, Catawba and Clinton, 1 and 2 years old, exceedingly strong and well rooted; also, very fine plants of the *Concord, Delaware, Diana, Hartford Prolific, Northern Muscadine, Rebecca,* and *Union Village;* the seven for $6.

Evergreens—European Silver Fir; American and Norway Spruce; American Arbor Vitæ; Balsam; Hemlock; Austrian, Corsican and Scotch Pines; ranging from 2 to 6 feet.

Deciduous—American and European Mountain Ash; Weeping Ash; American Elms; English Weeping Elms, (very graceful;) Horse Chestnuts; Catalpas; European Larch; Silver and Sugar Maples; Linden; Tulip Trees, (Nursery grown and very fine,) Black Walnut and Weeping Willow.

Shrubs—Altheas; Fringe Trees, Purple and White; Double Flowering Almond, Cherry and Peach; Honeysuckles; Lilacs; Snowballs; Sweet Briar; Spireas; and a great many others. See Catalogue No. 3.

Roses—One of the best and largest collections in America; best plants of the Augusta at $1.

Dahlias, Pœonies, Border Plants, Bulbous Roots, &c., in great variety.

Rhubarb—Cahoon's Giant and Linnæus; the best two varieties without question; very low by the doz., 100 or 1,000.

Asparagus—Very strong, 1 and 2 year old roots.

Hedge Plants—Osage Orange; Honey Locust; Privet, 1 and 2 years; Red and White Cedar.

Our articles generally are of the finest growth, and will be sold at the lowest rates. For particular information see

Our Several Catalogues, viz:

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No. 2. A Descriptive Catalogue of Fruits.
No. 3. A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
No. 4. A Descriptive Catalogue of Dahlias, Green House, and Bedding Plants, &c.
No. 5. A Wholesale Catalogue for Nurserymen and Dealers.

Forwarded on receipt of a stamp for each.

Aug. 25—weow5tm2t. SMITH & HANCHETT.

WESTINGHOUSE HORSE POWER,S

THRESHING MACHINES,

EXCELSIOR FANNING MILLS,

For sale by A. LONGETT,
June 23—w4tm3t 34 Cliff st., New-York.

PORTABLE CIDER MILLS—

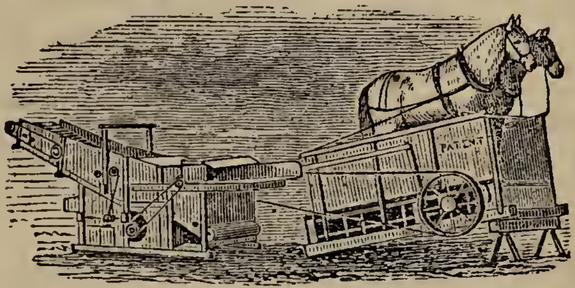
For sale at Agricultural Depot, 100 Murray St., New York.

HENRY F. DIBBLEE.

LAND FOR SALE OR EXCHANGE.—

I will sell or exchange for land in the State of N. Y., two farms, one containing 136 and the other 100 acres. Said farms are pleasantly located in Prince William Co., Va. They are in a fine state of cultivation, having been greatly improved for the last few years; buildings good, well watered, and near a good market. For further particulars inquire of or direct to

ISAAC COLLINS,
Aug. 25—w3m1t.* Kinderhook, N. Y.



HORSE POWERS, THRESHERS, &c.,

MANUFACTURED BY

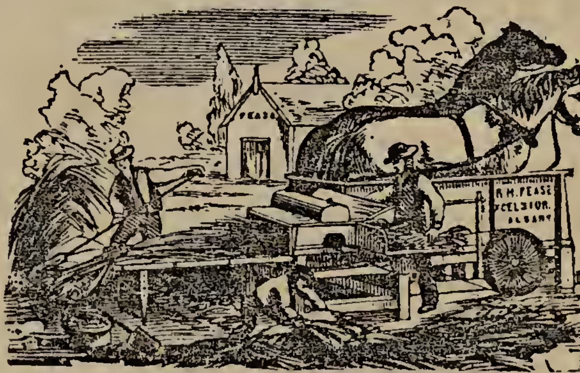
G. WESTINGHOUSE & CO.,

At the Schenectady Agricultural Works.

The attention of the public is respectfully invited to the Machinery manufactured by us, consisting of Improved Endless Chain Horse Powers, for one, two, and three horses; Lever Powers for from four to eight horses; Combined Threshers and Winnowers, Threshers with Vibrating Separators, Clover Machines, Wood Saws, &c. Our machines have been long before the public, and have, almost without exception, given entire satisfaction to those who have used them.

We have lately improved the Vibrating Separator by making it in two parts, and driving it by a double crank, so that the parts move in opposite directions, and counterbalancing each other, so that the violent jerking made by use of a single crank, is avoided. These will be furnished only by special order, and at an increased cost over the other kind, when attached to the Thresher, of five dollars. We will send our circular containing price list and full descriptions of our machines, upon application; and will pay prompt attention to orders and correspondence.

G. WESTINGHOUSE & CO.,
June 30—w4tm3t. Schenectaday, N. Y.



"The Best in the World."

OUR EXCELSIOR HORSE POWERS,

THRESHERS, and THRESHERS & CLEANERS

Combined, CIDER AND SAW MILLS, &c., are acknowledged second to no others, and have been awarded the highest testimonials where they have been exhibited. We have manufactured them for the last 6 years, and they are warranted to perform satisfactorily in every respect.

PRICES FOR 1859-60.

Two-Horse Power and Thresher, complete,	$160.00
One-Horse Power and Thresher, complete,	128 00
Two-Horse Power and Thresher, Cleaner combi'd,	245.00
Cider Mill, (Krauser's Patent,)	40.00
Saw Mill,	37.00
Bands alone,	5.00

For further information, address

PEASE & EGGLESTON,
Albany, N. Y.,
Manufactrers and Dealers in all kinds of Implements and Machines.
June2 —w8tm3t

IMPORTED WHITE MEDITERRANEAN SEED WHEAT.—A small quantity just received, of very superior quality. Price $5 per bushel.

Also a complete assortment of Farming Implements, Horse Powers, Thrashers, Grain Mills, Plows, Hay Cutters, Corn Shellers, &c., &c.

Also a large assortment of Garden, Field and Flower Seeds, of the most reliable varieties.

R. L. ALLEN,
New-York Ag. Warehouse and Seed Store,
Aug. 18–w2tm1t. 191 Water Street, New-York.

HORSE POWERS—For sale at Agricultural Depot, 100 Murray St., New-York.

Sept. 1 HENRY F. DIBBLEE.

CIDER MILLS! CIDER MILLS!

Excelsior Cider Mill—(Krauser's Patent.)

The experience of several years in manufacturing and using the above machine, warrant saying that they are unequalled by any Mill of the description in use. They are compact, simple, and durable, and got up in a most substantial manner; are just the article needed by every farmer. Price $40.

Orders promptly filled by addressing
CHARLES E. PEASE, Excelsior
Aug. 18—w4tm1t. Agl. Works, Albany N. Y.

THRESHERS, FAN MILS, AND CORN SHELLERS—For sale at Agricultural Depot, 100 Murray St., New-York. HENRY F. DIBBLEE.

DRIED BLOOD AND WOOL MANURE.—A new and valuable Fertilizer, containing a large proportion of nitrogenous matter. Price $30 per ton, in barrels containing 200 lbs. No charge for package. Also Peruvian and American Guano, Bone Dust, Phosphates, Plaster, &c.

R. L. ALLEN,
New-York Ag. Warehouse and Seed Store,
Aug. 18–w2tm1t 191 Water St., New-York.

IMPORTANT TO FARMERS & DAIRYMEN. We would respectfully announce that we have become the Publishers of that valuable and beautiful work,

MILCH COWS AND DAIRY FARMING,

The Best Book Extant on the Subject,

Comprising the Breeds, Breeding and Management, in Health and Disease, of Dairy and other Stock; the Selection of Milch Cows, with a full explanation of Guenon's Method; the Culture of Forage Plants, and the Production of Milk, Butter and Cheese; embodying the most recent improvements, and adapted to Farming in the United States and British Provinces; with a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management.

BY CHARLES L. FLINT,

Secretary of the Massachusetts State Board of Agriculture; author of "A Treatise on Grasses and Forage Plants," etc.

FULLY AND BEAUTIFULLY ILLUSTRATED WITH

130 ENGRAVINGS.

12mo. 416 pp............Price $1.25.

The chapter on the diseases of Dairy Stock, mostly prepared by Dr C. M. Wood and Dr. G. H. Dadd, is worth many times the cost of the book.

Milch Cows and Dairy Farming.—Charles L. Flint of Boston, Secretary of the Massachusetts Board of Agriculture, is the author of a new work upon a subject never before fully treated in this country, which, if we mistake not, will prove the most valuable book for universal use among farmers that has ever been published in this country. There is scarcely anything worth knowing, about how to select a cow, how to treat her, and how to make butter and cheese, that cannot be found in this volume, which contains numerous illustrations, besides its concise language, carefully written from all the best authorities, and much personal observation. It is a work that was much needed, and one that in recommending we shall do good to the farming interest. It is published on good paper, clear type, with many well cut wood engravings and contains over 400 pages, and, we suppose, will sell for $1.25—*New York Tribune.*

PUBLISHED BY

PHILIPS, SAMPSON & CO.,
13 Winter Street, Boston.

Sold by all Booksellers and Periodical Agents throughout the country.

N. B.—Copies will be sent, post-paid, on the receipt of the advertised price. Aug. 18—w2tm1t.

SUGAR AND MOLASSES

From the Sorgho and Imphee.

The best directions to sugar makers and all who grow or use these new Sugar Canes, may be found in

OLCOTT'S SORGHO AND IMPHEE,

A new edition of which is just published, with a supplement, giving new and valuable statistics and experiments by J. S Lovering, in 1858.

PRICE ONE DOLLAR.

Sent prepaid by mail on receipt of price.

☞ A Catalogue of one hundred Agricultural Books sent free to any address. A. O. MOORE,
Agricultural Book Publisher,
Aug. 18—w2tm1t. 140 Fulton-st., New-York.

MAPES' ONE-HORSE SUB-SOIL PLOW—For deep cultivation among growing crops. Also three larger sizes for regular field subsoiling. For sale at Agricultural Depot, 100 Murray St., New-York.

Sept. 1—1t. HENRY F. DIBBLEE.

EXCELSIOR AGRICULTURAL WORKS,

CHARLES E. PEASE, Proprietor,

Successor to Richard H. Pease.

EXCELSIOR RAILWAY ENDLESS CHAIN

HORSE POWERS, THRASHERS & SEPARATORS.

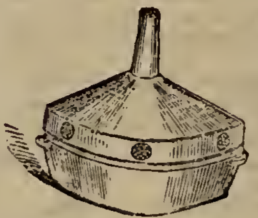
The attention of those intending purchasing machines for the present harvest, is respectfully solicited to the above make, as they are undoubtedly the easiest for the horses, the most durable, and at the same time most efficient machine of the kind ever presented to the public. Their frequent trials in competition with all the leading Horse Powers of the country, have uniformly resulted in their success.

Cider Mills, Saw Mills, Clover Hullers, Hay, Straw and Corn Stalk Cutters, for power, and general assortment of Agricultural Implements constantly on hand. All communications will receive prompt attention, and Circulars will be sent gratis on application. Address

CHARLES E. PEASE, Excelsior
Aug. 18—w&m1t. Agl. Works, Albany, N. Y.

PRATT'S PATENT SELF-VENTILATING

COVERED MILK-PAN.



This is an enclosed milk pan, so arranged as to secure the supply and circulation of air required for the separation and rising of the cream. By reference to the engraving, it will be seen that the pan has a cover; around the lower rim of this cover are several minute perforations, for the air to enter, and at the top of the chimney, (as it may be called.) which rises from the centre of the cover, is another series of perforations for the air to escape. When new milk is placed in this pan, the colder external air presses in through the lower range of perforations in the cover, and forces the warm air out through the perforations above, thus producing the required circulation. This circulation of air will diminish, as the cooling process goes on, but not cease; for, gases being evolved in the production of cream, their lightness will still cause the air to draw in through the lower perforations, and so continue the process of ventilation.

The value of this new milk-pan will be at once apparent. Dairymen often have great difficulty in protecting their open pans from gnats, flies, rats, mice, snails, lizards, &c., &c.; and they cannot cover them, because, if the air is shut out, the cream will not separate from the milk.

But not alone to dairymen is the invention of value. In every family milk is used; and with one or more of these self-ventilating pans, the best condition for raising cream is secured. Covered, and set upon a shelf, or the cellar floor, the pan is entirely free from molestation. During the time that the patent was pending, in 1858, this Milk-pan was exhibited at the U. S. Agricultural Fair, held in Richmond, Va.; at the Pennsylvania State Fair, held at Pittsburgh; and at the New Hampshire State Fair, held at Dover. In each case DIPLOMAS were awarded.

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Lizzie,	American Herd Book,	Volume 2,	page 447
Juno,	do do	do 2,	do 417
Lucretia,	do do	do 3,	do 514
Rouge,	do do	do 3,	do 642
Maud,	do do	do 4,	do 463

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No. 4. Wholesale Catalogue or Trade List.
No. 5. Descriptive Catalogue of Flowering Bulbs.

Aug. 11—w6t. Oct. 6—w1t.

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THE GARDEN:
A Pocket Manual of Practical Horticulture,
For Sale at this Office.

Annual Register for 1860.

The sixth number of this work is in press, and we wish now to say a word to our advertising friends. The num- of pages devoted to advertisements being somewhat limited, many applications have each year reached us too late for insertion, and it is on this account, as well as in order that the work may be completed as early as practicable, that those who wish for space in this department should send in their advertisements immediately. Prices as in previous numbers: One page, twenty dollars; one-half page, twelve dollars; one-third page, eight dollars; business cards from one to five dollars. Advertisements will be handsomely displayed, according to the room they are expected to occupy.

VERMONT STATE FAIR.—The Tenth Annual Exhibition of the Vermont State Agricultural Society, will be opened at Burlington, September 13th, and continue four days. Circulars, Show-bills, and General Regulations obtained by addressing

HENRY S. MORSE, Supt.
Sept. 1—w2tm1t. Burlington, Vt.

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DEVON CATTLE FOR SALE. I now offer for sale "Mammon," 3 years old, bred by R. H. Van Rensselaer, Esq., of Otsego Co., N Y., from imported stock; is of good size, perfectly kind, and has proved himself a sure and superior stock getter.

"Young Metropolitan," 1 year old, bred by Joseph Juliand, 2d, of Bainbridge, N. Y.

"Moss Rose," 3 years old, bred by Joseph Juliand, 2d; now in calf to "Metropolitan," a bull recently sold by me to Joseph Cooper, Esq , near Cincinnati, Ohio.

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Hints to Horse Keepers: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forester.) Beautifully illustrated. Price $1.25.

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LINSLEY'S
ESSAY ON THE ORIGIN, HISTORY AND CHARACTERISTICS OF MORGAN HORSES.
By D. C Linsley—Price $1, For sale at this office.

FORBES.

THE CULTIVATOR.

VAN VRANKEN. N.Y.

THIRD **To Improve the Soil and the Mind.** SERIES

VOL. VII. ALBANY, OCTOBER, 1859. No. X.

PUBLISHED BY LUTHER TUCKER & SON,
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ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

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THE CULTIVATOR has been published twenty-five years. A NEW SERIES was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at $1.00 each.

The same publishers issue "THE COUNTRY GENTLEMAN,' a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 a year. They also publish

"Letters on Modern Agriculture."

BY BARON VON LIEBIG—EDITED BY JOHN KLYTH, M. D.

This is the most remarkable production of its distinguished author, who here enunciates his matured views on Agricultural Science with the same wonderful resources of logic and expression that characterize all his writings. The volume consists of 270 12mo. pages, and contains 14 chapters or letters.

In his Preface the author remarks that he has written with particular reference to the state of things in Germany, and does not intend to implicate English farmers or teachers in the errors which exist in his own country. He says:

> "These letters must therefore be regarded as a mirror in which the scientific principles already established, and certain erroneous doctrines prevailing in practice, are reflected side by side; and each individual must be left to draw his own conclusions, on comparing his own acts with the standard thus furnished him."

One of the characteristics of this book, is its sharp controversial tone. Baron Liebig feels, with justness, that he has been grossly misrepresented by a set of second or third rate Scientific men, who have educated themselves up to a tolerable familiarity with the experimental appliances by whose aid scientific discovery is prosecuted, and therefore deem themselves, in fact, philosophers, although deficient in the higher gifts of rightly planning an inquiry, and rightly interpreting the answers which willing Nature makes to their blundering questions. We cannot, however, throw aside all that these well-intentioned men have done, nor place them utterly under the ban of Science; neither can we accord infallibility to the logic of our distinguished author, nor accept all his doctrines as the real expression of natural laws.

Science takes her materials from cabin as well as from palace, and the humblest observer is a builder in her walls as much as the imaginative speculator or the severe logician. Each has his office to perform in the development of science, and when, from the difference of their gifts or the oppositeness of their points of view, they come to conflicting conclusions, it is to be expected, nay hoped, that they will fight away all errors, so that the truth shall stand unblemished

The first letter is occupied with the author's views upon the Relations of Science to Practice. He shows that the method of Experience founded on limited observation, by which Agriculture has chiefly progressed hitherto, is in effect opposed to the method of Science founded on experiment. He urges that the former has its limit,—the limit of the senses, which has been long ago reached, while the latter, which has no limit, but may be extended indefinitely as long as the human imagination can devise anything new, is the only way in which Agriculture can progress,—the only means to which the statesman can appeal to save the growing populations from ultimate starvation.

He charges upon practical men the folly not only of not assisting science, but of "opposing her in almost every thing she has done." He charges them with a blind adherence to a blind experience, and after setting forth the superiority of the scientific or inductive method as a means of progress, he declares that

> "The world has been metamorphosed by its introduction. It is to this method that the present day is indebted for its peculiar characters. The Greeks and Romans possessed metaphysics and the fine arts as we do; but the natural sciences, the offsprings of the inductive method, were unknown to them. To this method we owe the millions of willing and industrious slaves, whose labor costs no tears or groans. It has bestowed on Germany alone, what is equivalent to from 700,000 to 800,000 horses, which with untiring energy and the speed of the wind, bring from the most distant lands their various products to satisfy the wants of man; and they need no hay, no corn, to feed them. The fruitful land necessary to produce the food for this number of horses of flesh and blood, remains for the use of five to six millions of men who can be maintained on its surface."

Our author now goes on to recognize that the value of science has latterly been admitted by the more intelligent and progressive agriculturists—a class that "for more than half a century have directed all their efforts to gain an insight into the processes of husbandry." "The natural sciences were even recognized to be the source of progress," and "agriculturists felt the necessity of accounting for their acts, and the knowledge that they were doing the right thing in the right way, appeared to be indispensable to all progress." But at this point the pseudo-philosophers, the professional agricultural chemists, who work for present emolument, and deluge the world with sham science, made their appearance. Our author gives these men such a "dressing-out" as might be expected from his trenchant pen.

But we must here demur to the sweeping two-handed manner in which he wields his broadsword. No doubt this "severity is inspired by sincere conviction;" and one full of the consciousness that we are but on the threshold of Agricultural Science, may properly feel indignation on finding that in "a recent hand-book of practical agriculture, the effect of soils, manures, irrigation, drainage, and the action of each fertilizing agent on individual classes of plants, are all brought into harmony and explained in the most beautiful manner."

Much may have been published in Germany that is thus complete, where completeness is an impossibility, and a false science is doubtless too much encouraged; but it is going too far to assert that "*this is all sham, without a single law, or a single truth.*"

If Liebig is forced thus to express himself concerning what claims to be the agricultural science of Europe, what would he say were he condemned to read the lucubrations of some of our American agricultural philosophers! Suppose the much injured Coryphæus of our agriculture—the resplendent American Jacobus Aureolus Theophrastus Paracelsus Bombastus were to collect his original contributions to agricultural science—the leading items of which might be, *Tannic acid a direct food of the Strawberry—Shade beneficial to Vegetation—Chilian Guano—Nitrogenized Super-phosphate of Lime—Progression of Primaries*, &c., and dedicate the same to his admired and much quoted friend Baron von Liebig, what would the latter have more to say of sham in German agricultural science?

We claim to know more of this matter than Prof. Liebig *can*, and as we are content to be patient and let these air-guns go off in their own way, so long as not only the powder, but the shot likewise, is mere "gas," we really wonder that our author has taken such umbrage at the transatlantic shams.

There is no unmixed evil in this world, and as the original Paracelsus, in spite of his superlative arrogance and his absolute want of any regard for truth and justice—so that he stands as the great prototype of quackery, accomplished indirectly a vast deal of good; we may even hope that something useful will remain, after some yet infant Hercules shall grow equal to cleansing the augean stables of our popular scientific literature.

And here, to pass from those who are notorious vagarists, to a field occupied by earnest workers, we find a great deal of misdirected energy in our country, and chiefly in the chemistry of the Agricultural Departments of the Patent Office, and of various State Geological Surveys

We find in the Reports yearly emanating from such sources, numerous analyses of plants and soils, standing there in stiff order, executed with all the form and perhaps in all the spirit of the truest science, but worthless, except as embellishments. These analyses are good for nothing. Nobody uses them for any important purpose, because they are made for no important purpose. The general ends of such analyses were long ago served. Henceforth, in order to be useful, they must be made as a part of some extended special inquiry, in planning which, they are clearly foreseen to be indispensable *to the results. Science consists, not in the making of analyses or experiments, but in the using of them.*

To return: In setting forth the difference between the methods of Practice and of Science, and in animadverting upon the faults of the imperfectly scientific, it appears to us that Baron Liebig has separated related things with altogether too much rigor.

In our estimation, there is at this day, taking the cultivated world together, no real "conflict between practical agriculture and scientific chemistry." Whatever disagreement there may be, is no greater than also exists between practice and practice on the one hand, or between science and science on the other. Not to adduce any of the unsettled questions of Practice, we see that chemists have not fully decided whether or not nitrogen is appropriated by plants in any other forms than those of ammonia and nitric acid, and though Baron Liebig is certainly one of the most competent men now living to investigate a chemical question, whether it require the genius of the experimenter or of the logician; yet we are prepared to do battle against some of his most cherished theories, and to side in some particulars, with those whose science he denounces as "sham." The conflict, if anywhere, is everywhere, and all valiant lovers of the truth will enter the lists to help fight it out. Neither do we admit that the method Practice employs for her progress—the deductive method—is so absolutely opposed to and irreconcilable with the scientific or inductive method.

Our author has in mind, in his writing, two extremes, which certainly differ widely enough; but he forgets that there are also an indefinite number of connecting links between them, so that while the most empirical and unreasoning bit of progress that the world ever made, has not been altogether destitute of the scientific spirit, neither have the proudest achievements of modern science been pure from the gropings of empiricism.

The chemist in his laboratory, in attempting to discover hidden truths, is obliged to "cut and try," in the same way as is done by the farmer who seeks to improve his soil by manures and other appliances.

Leverrier's calculations led to the discovery of a new planet, but it was not found where he calculated!

Liebig explained the use of plaster by asserting its power to absorb and fix ammonia; but Boussingault demonstrated that in the soil it can have no such effect, and now facts render it probable that plaster rather unfixes ammonia when in the soil.

Liebig once attributed great value to artificial supplies of ammonia to crops, and thought its efficacy due to its serving as a source of nitrogen, which might otherwise be deficient; now he considers the action of ammonia to be almost purely indirect—a solvent for the mineral matters of the soil.

Thus Science, in quarters where our author will be disposed to admit its genuineness, is at war with itself. It is in fact, imperfect, undeveloped, and struggling. But Practice is no more badly off.

It is true that practical farmers have made great blunders; in their attempts at progress, they have grossly misunderstood Science, have depreciated and misrepresented her; have ignored or even fought against her inductions. On the other hand, it is equally true that scientific men have made the most egregious mistakes, and have been as stubborn in their errors as other men are. They have been in many cases shockingly ignorant of practical agriculture; have left unconsidered the fact that the first business of the agriculturist is with his Art, and that only after he has fed himself and the rest of the world, can he attend to Science. The scientific man is often arrogant and holds a high head; he has confidently promised wonderful things, that are yet to be shown; and on the whole we are convinced that he is as human as the practical man.

It is then devoutly to be wished that Practice and Science would unite all their resources for the advancement of agriculture, remembering that each has its special province, but that both must work together, in order to realize the best results. And we must not conceal the obvious fact that Science is ahead of Agriculture, not so much in the exclusive possession of the true method of progress as in the vigorous application of this method. Here Practice may learn of Science a most useful lesson.

First of all, practical men must educate themselves to an understanding of scientific terms—to an appreciation of scientific conceptions. If they will but place themselves on the level with Science, all misunderstandings will cease, or at least so far diminish as not to impede progress.

In agriculture there should be established that kind of system which is now observed among the cultivators of Chemistry and Physics—a system that ensures the most rapid development of new and true facts and principles. Says our author:

> "A glance at a chemical or physical journal must fill the mind of an agriculturist with astonishment, at the mass of problems and their solutions which it contains, and at the immense labor which has been readily and without reward bestowed upon the whole. Each day brings its own progress without strife; for each cultivator of these sciences knows what constitutes a fact, conclusion, rule, law, opinion and explanation. There are specific tests for all these which every one uses before he puts each to the test of its own peculiar touchstone, before he circulates the fruit of his labor. Each assiduously seeks to bring to light hidden facts, which are immediately submitted to proof by others, and receive their proper place when they are found to be genuine. One individual possesses the talent for seizing the points of resemblance between two facts; another has a keen eye for their differences; in this way they render mutual assistance in the proper elucidation of phenomena. Special pleadings on the part of any one for his own peculiar views, without striking facts to support them, or the attempt to palm off on others any unproved facts, is instantly rebutted by the moral of science. The earnest desire of a mutual understanding is ever paramount."

In Germany there has arisen a noble company of investigators, educated both in the field and in the laboratory, who are begining to do for Agriculture what has been doing for Science throughout the last 50 years. But in this country, what a sorrowful state of things! We have hardly one man who is doing anything to develop the great laws of Agricultural Science. It is, however, impossible that there should be investigators before practical farmers shall say,—"We believe that Science is able to benefit our profession, and we will establish and support stations for experimental investigation; we will employ and pay men of true Science to work in our behalf."

We hope that this stirring letter of Baron Liebig's, will be read and pondered by all who have at heart the interests of agriculture. Let this country, whose genius and people are so much admired by the author of this book, deserve to have better things written of it, than he has written of his Father Land, where he says:

> "One of the worst points in the character of practical men, is their sensibility to opposition. The total want of foundation for their erroneous views, is the reason why they regard them with such affection and tenderness. It makes them blind to their interests, and deaf to all instruction. They look on every one as an enemy who does not flatter their prejudices, who openly tells them that there yet remains much to be learned, and that the consciousness and confession of our Ignorance, and the knowledge of our faults, are the first steps toward improvement. I who in my heart believe myself to be their most candid and sincere friend, must therefore, at once make up my mind to bear with resignation the whole weight of their contempt, with which pride in their own experience fills them, if I attempt to prove the assertion that the prevailing system of agriculture for half a century, has been one of spoliation; and that if persisted in, the inevitable result will be at no distant date, the ruin of their fields, and the impoverishment of their children and posterity."

Seeding to Grass.

In answer to several inquires on this subject, we may state that seeding with a *grain crop* is chiefly to be recommended by its economy of labor, the ground being in order to receive the seed without any additional tillage. This is no doubt the best way to seed down with clover after wheat, sowing early in the spring, but instead of trusting "luck" for it to "take," we would always recommend rolling or a slight brushing—the latter will rather benefit than injure the wheat. The young crop of clover no doubt slightly lessens the growth of the wheat, but the injury is not great; in sowing *timothy* with wheat, a greater loss results to the grain crop. We have seen the timothy grow so large as to render cutting the grain crop quite difficult, and it evidently much diminished the product. The best way, undoubtedly, in seeding to timothy after wheat, is to turn over three or four inches of the surface soon after harvest, by means of a gang-plow, which will pass over three or four acres a day; and about the first of autumn, or sooner, sow the seed thickly (half a bushel per acre is more economical than less,) and brush it evenly in. Soon after the first rain, the whole surface will present a handsome green coating, which will be several inches high before winter, and the next year a fine crop will grow. If the seed is sown thin, the product will not only be much less, but there will be greater chances for weeds. Success requires that the seeding be done very early in autumn.

By sowing a mixture of clover and timothy at the rate of one bushel per acre, very early in spring on unoccupied mellow soil, and brushing it in, we have had a fair crop the first year, and a very heavy one the second, namely three and a half tons per acre at the first cutting, and an after-growth a foot high—which was nearly double the results with the ordinary quantity of seed. But we would not recommend the practice of sowing grass seed alone in spring for common farming, as the ground must be prepared exclusively for it, and we lose a crop of grain from the land.

Since writing the above, we observe in the Transactions of the N. Y. Ag. Society for 1855, the statement of an experiment by Wm. M. Holmes of Washington county, N. Y., in which a field was equally divided and half sown with grass seed and oats together, and the other half with oats alone. After harvest the oats stubble was plowed shallow and sown with half a bushel of timothy per acre, about the first day of autumn. The latter gave more fall feed than the spring seeding with the oats. The next season the spring seeding was "full of weeds;" the other was clear timothy, and was worth three dollars more per acre. Although cut quite early, the fall seeding gave 5,000 lbs., and the spring seeding only 3,800 lbs. There is no doubt that the full and even germination of the autumn sown seed on freshly turned soil, tended to keep down the weeds. The results would no doubt be varied by the amount of rain early in fall, but we think not to a great degree.

Gypsum or Plaster of Paris.

Closing a recent article on "Clover and Gypsum," (Co. Gent. Aug. 4, '59,) we promised to speak of the mineral constituents of the latter, and its practical uses as an application to the soil. We do not expect to offer any new theory in regard to its action, or anything beyond what a careful examination of published researches and experiments of others, and our own trials of it upon the different products of the farm, have taught us. So much even, may interest a portion of our readers.

Gypsum, or sulphate of lime, is a mineral compound frequently met with in large quantities, and where it may be quarried like stone. Many soils contain it in greater or less amount, and it is taken up by certain classes of plants—as their ashes show on analysis—and it is found in the excrement of grazing animals. Chemical science states the constituents of 100 pounds of native plaster or gypsum as—water 21 pounds, lime 33 pounds, sulphuric acid 46 pounds—the water being in chemical combination with the sulphate of lime. When burned or calcined, the water is driven off, and the 100 pounds of plaster is composed of 41½ pounds of lime, and 58½ pounds of sulphuric acid, and 79 pounds, burned, equalling 100 pounds unburned plaster. This analysis is that of pure gypsum, but plaster as usually found, often contains several per cent of other substances, as clay, carbonate of lime, &c. If much lime be present it will injure the value of the plaster as an absorbent of ammonia, for which purpose pure gypsum is often usefully employed in stables and upon dung-heaps, but as a soil dressing, such plaster is as valuable as though pure. aud more so than where lime is wanting.

The agricultural effect of plaster is the same, whether burned or unburned, if equally pulverized When reduced to powder in a raw state, it does not swell by absorbing water, even if placed in it, but remains like sand. If properly burned, and then exposed to atmospheric influences, it regains its 21 per cent of water, but after that has no special attraction for moisture. Hence we see no ground for the opinion entertained by some, that plaster benefits vegetation directly by attracting to it a greater supply of water than it would otherwise receive. Over-burning injures the attractive power of plaster—hence ground plaster is generally preferred and employed.

It is very generally conceded that gypsum is beneficial to most leguminous plants, and especially to red and white clover. It is frequently applied to peas, beans, corn, potatoes, and like products, and sometimes to wheat, oats, and barley, but most writers agree that its direct application to grain crops is of doubtful utility. Prof. S. W. Johnson, speaking of the effect of plaster says:—"Experience shows that the increased growth of a plant consequent upon the use of gypsum is disproportionately great in the *stem* and *foliage*; the production of *seed* is not greatly increased." This agrees with the general opinion and practice of farmers—those plants which yield a large mass of vegetation, and are valued mostly for this product, are thought to best repay the application of plaster, while it is seldom given on grains mostly cultivated for their seed. Tobacco and corn, with abundant stems and leaves, and potatoes with large vines and fleshy tubers and little seed, are adduced as further examples. Experiments have shown a large increase in the vine or straw of the pea, produced by a dressing of plaster, while the seed itself was but slightly affected in product.

Plaster operates most beneficially upon light, dry soils, or those of a sandy or loamy character. "*Excess of moisture* and *poverty of the soil*," says Johnson, "are the chief hindrances to the action of gypsum." The richer the soil and the better the culture, the greater the benefit received from a dressing of gypsum. Some soils, however, already possess a sufficient supply of sulphate of lime—or at least of sulphuric acid—hence no further application is required. Mucky soils are usually of this character, and sandy land overrun with sorrel, needs lime or ashes rather than plaster, as a fertilizer. Soils abounding in vegetable mold receive little benefit from gypsum, but even clays, if dry, and deficient in mold, are much improved in productiveness by plaster.

The action of gypsum is largely influenced by the character of the weather. It proves most beneficial in a warm, moist season—in one of a contrary character the effect is scarcely evident. This has been explained as resulting from the more abundant moisture of frequent rains, which dissolve a greater amount of the plaster, and thus render it available for the use of plants. At the same time the greater heat augments the chemical action of the leaves upon the sulphate of lime, decomposing the same and rendering it active upon other minerals contained in the soil. We have found that upon clover closely pastured, its effect is slight, while a similar field allowed to grow uncropped, was decidedly benefitted. This indicates, we think, that the good effects of this stimulant are elaborated through the leaves of plants, and the additional elements drawn from the air and soil by the more abundant vegetable growth.

The quantity usually applied is from 100 to 300 lbs. per acre, repeating the smaller amount more frequently—perhaps annually—on all crops to which it is found beneficial. It is usual to sow plaster on land newly seeded to clover, and the clover crop may be largely inly increased by an annual dressing of this fertilizer. Some have sown it on clover after cutting the first growth for hay, in order to increase the second growth for seed; but the desired effect has not usually been attained. The growth of clover hay has been increased, but the product of seed was imperfect, and a light crop. For corn and potatoes, a hill-dressing, after the first hoeing, of a spoonfull to the hill is generally given, though some sow it broadcast even on these crops. For wheat, many farmers recommend plastering the summer fallow, either before breaking up the same, or previous to the last plowing. Upon peas, beans, buckwheat, &c., it is usually sown soon after the plants appear above ground. The effects of any application of gypsum, are generally increased and hastened if followed by a warm and abundant fall of rain.

Gypsum, as we have formerly remarked, is not strictly speaking a *manure*, nor will it answer *instead* of manure. But on soils already fertile it acts as a stimulant, enabling certain crops to appropriate more readily and largely the food of plants already present in the soil, dew or rain, and atmosphere. It does not exhaust the soil, save as all increased production exhausts it—drawing upon its stores of fertility in proportion to the crop produced. It takes, as stated in our former article, an important part in the system of green manuring by plowing under the clover plant—one of the cheapest processes of enriching a soil not yet worn out, which has ever been employed. Its use in agriculture should be largely extended; if any are in doubt in regard to its effect upon their soils, a few simple and inexpensive experiments will test the question, and perhaps many other points now rather inconclusively settled.

Western Apples.

We are indebted to E. Y. Teas of Richmond, Indiana, for a fine collection of several varieties of Western summer fruits—some of which are well known to pomologists, and others of local character and not much known.

The *Red Stripe*, has been cultivated for many years at Richmond, but we believe not much elsewhere. It is rather large, long conical, (not unlike the Black Gilliflower in form,) somewhat ribbed, broadly and distinctly striped with light red on a light yellow smooth skin. It is very tender in texture, sub-acid, not of high flavor, ("good,") but undoubtedly valuable from its fair growth, and useful for stewing as well as for a table fruit.

Newton Early—very large, nearly the size of a Fall Pippin, roundish, much ribbed towards the apex, deep yellow with faint shades of green, stem short, cavity and basin deep, flesh rather coarse, sub-acid, of tolerably good flavor, not higher than "good."

Summer Hagloe—rather small, but very beautiful specimens of this fine culinary summer apple—flavor pleasant, "good." The Hagloe Crab is totally distinct small, and scarcely known in this country.

American Summer Pearmain—all the specimens nearly three inches in diameter, less red and more green than usually seen at the east, and of excellent flavor, standing high in the division of "very good."

Carolina Red June—specimens with the usual appearance, and exhibiting by the perfect condition in which they came, the peculiar excellence which this summer apple possesses of keeping long after it is ripe.

Sweet June or *Hightop*—fair specimens.

Maiden's Blush—rather larger and less reddened than those grown at the east.

The apple marked "Prince's Juneating," is not *Early Red Margaret* as suggested, but imperfectly grown *American Red Juneating* of Manning, or *Early Strawberry*, of the present lists. The Early Red Margaret has a short stem, is more ovate and less conical, and much earlier, being one of the earliest of apples.

Kirkbridge White—medium specimens; a fair apple, of moderate flavor.

Nut's Large—a large, conical, greenish apple, with faint red stripes—sub-acid, moderately good, juicy, very tender—probably a fine stewing apple.

Carolina Sweet—specimens too ripe; but from others which we have examined on former occasions, it appears to be a fine variety—rather large, nearly round, a deep rich yellow, and very sweet.

Claybank or *Stillwater Blush*—medium in size, roundish, slightly oblate, sub-acid, "good"—in general character similar to the Maiden's Blush, but probably less valuable.

Daniel—size medium, roundish oblate, stem long, in a small cavity; skin yellow, slightly striped with red; favor mild sub-acid, somewhat aromatic, of a fine, "very good" flavor.

Horse apple.—This nearly agrees with Chas. Downing's description, except that the flesh is not coarse—and it is not "acid," as Elliott states, but mild sub-acid.

Of the pears sent, nearly all were decayed, and could not be recognized—the one marked "perhaps Autumn Bergamot," appears externally like Summer Bonchretien, but we could not determine its flavor.

The shoots of the cherry appear like those of Early Richmond, which as we stated some months ago, is probably the variety known as the Early May in Central Indiana.

The branch of the Ohio Everbearing Rraspberry had 67 berries on a length of 10 inches. Our correspondent says he counted the berries on one plant of four canes, and found 518, one cane with 152 berries—in all stages of maturity, the largest three quarters of an inch in diameter—a supply of water and cultivation would have added much to their size. It appears to be a valuable sort at the West, but we should prefer a crop ripening together, as raspberries are not so much desired when we have peaches, plums, pears, grapes, melons, &c.

The Taylor Grape.

We are indebted to Samuel Miller of Lebanon, Pa., for specimens of the *Taylor grape*, a newly introduced variety, originally brought from the Cumberland mountains, between Kentucky and Virginia. Unfortunately, the box in which the grapes sent us had been packed, was crushed on its passage, and only a few imperfect berries remained. From these, however, we were led to a very favorable opinion of the variety, and think it must prove one of great value. The berries were medium in size, light or yellowish green, somewhat similar in appearance to the Rebecca, and of a decidedly fine flavor—we should think little if any inferior to the Rebecca in quality, judging with so imperfect an opportunity. S. Miller says, in the letter accompanying the specimens, "The grape I send you, after passing from the hunter's hands who found it, has since been in the possession of different persons who did not know its real value. But it is now in such hands as will soon disseminate it. A gentleman who has kindly distributed it free of charge to a number of persons, and who is interested only in adding to the list of our fine grapes, says, "It never has had a blemish or spot, in the same situation with the Catawba and Isabella, when the two latter failed entirely by rot." In size of bunch and berry it is a little less than the Catawba, when well grown. This season, he says, the drought has killed every thing in that part of Kentucky of the fruit kind except the grape I send you, which he had to take off before ripe, as the wasps were eating them. Hardier than Catawba, it is a great grower and good bearer. These specimens were picked on the 15th of August, and come to you after sixteen hundred miles of carriage by land."

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Buggy Peas.—I am a little surprised that there should be any controversy about buggy peas. I am now in my seventieth year—have been familiar with gardening from my youth up, and have always found buggy peas to grow as well as any. E. H. R. *Frederick City, Md.*

Hogs in Kentucky.—The Auditor-General of Kentucky has made his official returns for the year, and it seems that there are 815,538 hogs raised in the State this year, against 639,297 last year, being an increase of 176,241 head. This does not seem to indicate that the pork market has used up the stock in that state.

Raising Wheat and Chess.

Messrs. Editors—As the time of wheat seeding again comes round, all facts relating to its culture should be disseminated among farmers who raise this important cereal. When land in this section was first settled, the primeval forests cut down and burned on the land, the potash and other ingredients contained in the wood found their way into the soil, which when sown to wheat, even with the most common tillage, often produced enormous crops. But as a great yield, in those days, was the chief aim among farmers, it frequently happened that not much attention was paid to cleaning their seed ; in fact, they then possessed few of the facilities enjoyed by farmers of the present day for separating different kinds of grain from foul seed, consequently the seed wheat was sown in a condition far from clean, containing, perhaps, among others, wild mustard, daisy, cockle, and though last, yet not least, chess. These seeds sown so promiscuously, though at first unnoticed, from the greater luxuriance of the wheat, were still secretly filling the land with seeds, and it was not till the natural fertility of the soil began to give way under such severe cropping that they began to show themselves, and farmers saw when too late that they had been heaping up wrath against the day of wrath, and often very unwittingly too, from the practice among many of pulling out the foul stuff at harvest time, and either throwing into hollow stumps, or on rubbish heaps to get rid of it. Well, in course of time the stumps decayed, and the whole surface of the land was brought under the action of the plow ; the seeds then began to show themselves, and as chess happened to possess some of the characteristics of wheat, as coming to maturity about the same time, resembling it somewhat in manner of growth, it was the unanimous conclusion of some that chess was nothing more or less than wheat weakened and degenerated by severe freezing and thawing in winter, &c. Without entering into any controversy on the often mooted question of transmutation, I will simply state some facts in relation to it, together with my experience in the matter.

When I first began to raise wheat, some thirty years ago, after some thought on the subject, I took the position that if wheat turned to chess then chess would never grow again. But if, on the other hand, chess was a distinct species of grain, then it will grow and reproduce itself again from seed. In which opinion I was soon after confirmed by the observations of a most enlightened and enthusiastic lover of truths and facts,* who, while an engineer on the Erie Canal, which was being surveyed through this town, found, in passing through a wheat field, from which the wheat had been cut, a head of chess, which had fallen on the ground, that had sprouted and commenced growing. "There," said he, "it has long been contended by the advocates of transmutation that chess would not grow, but here is proof positive right before our eyes which sets this point at rest."

With such data as a starting point, I commenced the task of eradicating chess from the farm I occupied. First. By cleaning my seed wheat as clean as I could by a fanning mill, and afterwards by hand picking. Second. By being careful at harvest time to take up all, both wheat and chess, shelling as little as possible, to the barn, and threshing all together. Third. When the wheat was separated from the chess and other foul seeds by the fanning mill, they were taken to the mill and ground into feed, a quietus being given to them in this way, hardly attainable by any other save fire. The heaviest portion of the chaff was also taken out and burned, so as to prevent as much as possible, any seed going out in the manure.

Now for the result. After the third rotation, that is, after taking the third crop of wheat from the land, the chess had almost entirely disappeared, only now and then a scattering stalk appearing, and these not exclusively on the low parts of the field where the wheat was subject to be winter killed, but on the higher ground alike, showing that the seed was either deposited with the manure, or was shelled off at the time of harvesting a previous crop. And so, as each field was gone over in the above manner, the farm has ceased to produce chess. And now, brother farmers, my advice is, clean your seed wheat as clean as you can, then see that no foul seed is scattered on your land, and your wheat will speedily cease turning to chess. C. *Royalton, N. Y.*

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* David Thomas of Cayuga County.

How to Make Syrup from the Sorgho.

Messrs. Editors—According to promise I proceed to give you the details of our molasses making from the Chinese Sugar Cane.

We used an upright two roller iron mill. When the canes were ripe enough, or when about two-thirds of the seeds were turned black, we commenced operations by stripping the leaves from the stalk, and cutting off about one foot of the top. We then passed the canes through the mill, until we obtained about twenty gallons of the juice, which was then passed through a cotton strainer, (perhaps flannel would be better.) Then put about one gallon of juice in a kettle, to which we added about eight tea spoonfulls of soda, (such as is used in cooking,) to neutralize the acid, and about one quart of milk, or the whites of six eggs well beaten, to separate the albumen or mucilage which the juice contains. We then put in the other nineteen gallons of juice, stirring the whole well together. Then applied heat, and when it began to boil, skimmed off the scum as clean as possible. If it boiled too fast, so as to boil the scum under before we could get it all off, we checked the boiling with a little cold water. Then boiled it as fast as possible, skimming off from time to time whatever scum raised on top A lump of butter as large as a small hickory nut, put in a kettle, tends to prevent it from boiling over.

We boiled the molasses which we put up for summer use, until it was much thicker than common Orleans molasses. We then put it in a tub to cool, during which time a thick tough scum would rise on top, which we took off, and then put the molasses in a barrel, and it has stood the hot weather without any change.

We prefer it to the best golden syrup, and all who have tried it pronounce it excellent.

We tried milk of lime, (that is, unslacked lime dissolved in water until it looks like milk,) to neutralize the acid, but found it gave the molasses a dark color and a rather unpleasant taste. We then tried lime water, (that is, lime dissolved in water, and allowed to settle until it became clear,) which answered a very good purpose, but we thought the soda preferable, and accordingly used it. Irene Cole. *Flowerville, Ind.*

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Top Dressing Meadows.—"D. S. C.," in the Prairie Farmer, thinks top dressing grass-land altogether the best method of manuring farms. The dressing may be given in the fall or winter, when other work is less pressing, and should be most liberal the season before breaking up for a grain crop. All farmers may observe that turning under a good thick sward is of material benefit to the soil, and experiment shows there is no better means of getting such a sward than by manuring on the surface of a meadow or pasture—and no better time for such manuring than in autumn.

The Grasses—Red-top, (Agrostis vulgaris.)

From one of a series of articles on the "Grasses of Northern Ohio," written by Prof. Cassels, of Cleveland Medical College, for the *Ohio Farmer*, we quote the following paragraph:

"Were the habits and properties of the Red-top fully appreciated by the grazing farmer, it would be held in much higher esteem than it now is; and when they are properly estimated, its claims to his attention and favor will become more and more apparent. In fact, it is in many respects, preferable to the Herds grass, (Timothy) *Phleum pratense*—that universally esteemed grass—to those owners of damp cold lands, which are not adapted to the growth of the Herds grass, but when properly managed, are the best for the Red-top. Moreover, even those lands which now afford nothing but sedges and rushes, may be made at little expense, to yield luxuriant crops of *Red-top*, which when cut before the seed is ripe, will be found to be a rich and nutritious hay, and much relished by cattle and sheep.

"When cultivated for *hay*, it ought to be grown on damp (not wet) lands—clay lands, with a good dressing of lime is preferable; yet it will thrive on other soils. To obtain the full benefit of its nutritious properties, and its palatableness for cattle, it ought to be cut soon after it comes into blossom. It can be grown to advantage with red clover, which adds much to its value as a dry fodder, and may be sown in the spring with oats, giving it a good dressing, either of *air* slacked lime or plaster, the spring following the removal of the oats, plaster being preferable. When used for *pasturage*, it ought to be fed so as to prevent its going to seed, as it then loses much of both its sweetness and nutrition."

Sanford Howard, in his essay on "Grasses and Herbage Plants," in the Transactions N. Y. State Ag. Society for 1855, remarks upon two species of *Agrostis vulgaris*—distinguished as large and small—*major* and *minor*. The *A. vulgaris major* is probably the same as that spoken of by Prof. C. Mr. H. says: "It yields a large bulk of hay—rather light in proportion to bulk—and although of inferior quality as a pasture grass, compared with some species, it is readily eaten by cattle and horses, and produces a pretty large and regular growth through the season." Of the *A. vulgaris minor*, he remarks that it appears to correspond to the common *Agrostis*, or Fine Bent grass of English authors. It is only about half the size of the large kind,—its stalks are very slender, but often stand very thickly together. "It yields," he adds, "a less bulk of hay than the larger kind, and is much heavier in proportion to bulk, and of better quality, being highly esteemed for feeding working oxen. Its greatest advantage over the large kind, however, is that on *dry* soils, it grows better and lives longer."

In regard to the cuts illustrating the two kinds of Red-top, as given in the *Transactions*, we must say they do not represent any Red-top we have known under that name. The figure in Prof. Flint's work on the Grasses, is a better illustration.

In his "*Dairy Farming*," Prof. Flint remarks upon the subject under consideration as follows:

"Red-top is a grass familiar to every farmer in the country. It is the Herds grass of Pennsylvania, while in New-York and New-England it is known by a great variety of names, and assumes a great variety of forms, according to the soil in which it grows. It is well adapted to almost every soil, though it seems to prefer a moist loam. It makes a profitable crop for spending in the form of hay, though its yield is less than that of Timothy. It is well suited to our permanent pastures, where it should be fed close, otherwise it becomes wirey and innutritious, and cattle refuse it. It stands the climate of the country as well as any other grass, and so forms a valuable part of any mixture for pastures and permanent mowing lands; but it is probably rather overrated by us."

From our experience with this grass, both for pasturage and hay, we are inclined to value it highly, especially for mucky soils, occasionally under water, to which it is far better adapted than Timothy or June-grass, or indeed any other with which we are acquainted. The present year, both Red-top and Timothy were so injured by the great June frost in many places, as to prevent their heading out—our Red-top suffering most from this cause, as it did not produce any heads, while our Timothy in some places gives a light, late crop. Last season the Red-top, though young, gave a good growth of hay, and it promises to make a firm thick sward on our mucky mowing land, where Timothy will not flourish. We should be glad to publish the views and experience of practical farmers as to its character and value, and also in regard to saving and sowing the seed, and its management for hay, and as pasturage.

Leached Ashes for Pears—Experiment.

One year ago last spring I transplanted twelve young pear trees, each about six feet high. I manured them well with barnyard manure, putting it into the hole before transplanting, they all lived, and grew eighteen inches the first year; last spring they all leaved out, and appeared to be doing well, until about the first of June, when four of them gave signs of dying, the leaves began to turn yellow, and the bark to shrivel. I applied barnyard manure but to no effect, I then dug around the trees, and applied liquid manure at the rate of two gallons at each time twice a week, for two weeks, but that seemed to do no good; the trees were just alive and that was all, yet unwilling to give up the contest, I applied as a last resource leached ashes, putting on at the rate of two bushels to a tree, carefully loosening the earth around the tree before putting them on; they began to return immediately, and in eight days were as bright and vigorous as any of the others, and have grown since then six inches. Joseph L. True. *Garland, Penobscot Co, Me.*

We have known instances where the application of leached ashes has produced a surprising effect in imparting vigor to young and feeble pear trees—and other cases where it has done no good whatever—doubtless owing to differences in the condition of the soil. We think our correspondent dosed his trees much too heavily with it, and should fear injurious effects. When applied, it should be broadcast, not in a heap at the foot of the stem.

Great caution is needed in setting out young trees with manure, that none come in contact with the roots. Many young trees are killed by fresh manure placed in the holes. If old and well rotted, it is comparatively harmless; and if the manure is well raked into and mixed with soil, and placed at the more remote parts of very large holes, so that the roots will not reach it till the second year, when it has become well diffused through the soil, it will in most cases be very beneficial. There are so many instances where ashes are useful to fruit trees, as to induce their recommendation as a component part of all composts for trees, one of the best of which we have found to be about equal parts of barn manure and turf or peat, and about one-tenth to one-twentieth part ashes. Such a compost as this, rotted half a year or more and well broken up and mixed, and applied to the very remote parts of large holes would be very safe and highly useful.

Why does our Rural Population Decrease?

Messrs. Editors—Your correspondent in the Co Gent., of August 18th, undor the head of "Rural Faults," writes in the main very truthfully and sensibly upon the subject. As in the agricultural counties in the Empire State, so it is in the rural districts of New England; there has been a decrease in numbers within the last twenty years, of those engaged in farming, and an increase in villages, large towns and cities. The time was when the cultivation of the soil was the main business of the people, and but very few young men brought up and trained to the business, ever expected to resort to any thing else for a living. But those times have changed; manufacturing, railroads, &c., have revolutionized the whole business of the country, inviting to the pursuit of wealth in various channels, unknown to the youth of twenty years ago. To be *rich*, and to be rich in a hurry, is now the feverish anxiety of all "young America." The slow, but sure process of reaching a competency, by cultivating the soil, has no charms for the thoughtless multitude of the present day, though not one in ten of those that leave the farm for a more lucrative business, will at the meridian of life be one-half as well off as he might have been had he never sought the change.

This is a lamentable fact, and the growing evil of our day and generation. The would-be lawyer, doctor, merchant, divine, or city gentleman, have a hard road to travel, and must learn, when too late to retrieve their fortunes, that there is truth in the old adage, that "all is not gold that shines."

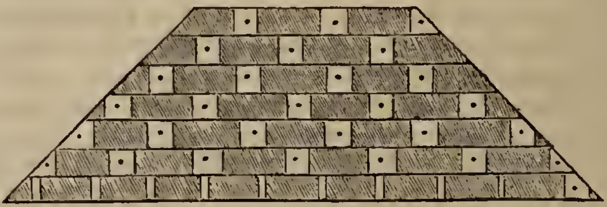
There is too much truth in the comparison drawn by your correspondent 'Onondaga," betwixt the manufacturer and farmer; while the former is constantly and vigilantly seeking the aid of a practical science, the latter is a disbeliever in any such "humbug," and is content to go along in the beaten track of his fathers. But I should be sorry to believe that the farmers of this country, as a class, are so wanting in common sense, and so lost to all decent propriety, as to be "*ashamed of their calling*" I think your correspondent misjudges them in this particular. The majority of men in all ages, in all countries, civilized as well as barbarous, have ever been, and ever will be, *improvident and reckless*. This, to me, is a satisfactory reason why they do not, and why they will not exercise the reason and judgment that God has given them, for their own best good. Thus the reckless love of adventure and hazard, induces them to relinquish a certainty for an uncertainty, when the chances are against them; like the youth who teased his mother at an improper age, for permission to go to the theatre, and received for an answer that she had seen the folly of it, said, "well, I too want to see the folly of it," and this folly they do see and feel often, to a sad old age, with the hand of necessity pressing upon them.

Another potent reason for leaving the farm is, the desire of companionship and company. The farm is dull, too isolated; congenial associates are not always at hand; fun and frolic they must have; recreations that are exciting charm the fancy, and flatter the imagination, and thus we see the large towns, cities, and even villages, filled to overflowing, the professions all crowded, trade overdone, while our farms are neglected and languishing for want of the necessary labor to keep them in a productive condition. How many thousands of our foreign population will clan together in the cities, and beg, steal or starve, before they will resort to the country to obtain work upon the farm? The love of distinction, and the hope of eminence in the chosen pursuit, has much to do in fanning the flame of a visionary imagination. But, alas! how few realize a tithe of the fond hopes of their youthful dreams, or the expectations of indulgent and doting parents. J. W. Colburne. *Aug*. 26, 1859.

Growing Strawberries on a Mound.

Eds. of the Co. Gent.—Having made this spring what may be termed a "Strawberry Mound," in accordance with the plan of one which I saw in the garden of a friend about two years since; and being so much pleased with it thus far, I have concluded to describe it, so that others who may approve of the plan, and be willing to incur the expense, may give it a trial. In *theory*, there does not appear to be any requisite wanting for success, the advantages being, that when the plants attain full size, neither grass nor weeds have room to grow, the runners cannot take root, the fruit is kept clean, water, or manure in a liquid form, can be applied in any quantity, by means of the basin on the top, evaporation is prevented by the brick pavement, and, lastly, the fruit will be earlier, in consequence of the ground getting warm sooner in the spring.

As my mound has only been made a few months, there has not yet been time to test it *practically*, as it would take longer time for that. I may, however, remark that my plants were obtained from Rochester, N. Y., and set out on the twenty-fifth of the third month (March) last, and in just nine weeks from planting, we gathered ripe fruit from them, full three inches in circumference. Nearly all the plants bore fruit, (they are of the Hooker variety,) and now the vines are larger and more vigorous than some of the same lot set out in an ordinary bed, and no other difference in the treatment.



The mound may be round or oval, as may please the fancy. Mine was made in an oval form, in consequence of there not being sufficient room where I wanted it for a circular one. They may be made of any length, but probably on account of the facility for watering, by means of the basin at the top, it should not exceed something like nine feet in *width* at the base. Mine is nine by twelve feet at the bottom, two by six feet at the top, and about two and a half feet high, the sides sloping at an angle of about forty degrees, containing two hundred and seventy-five plants in thirteen rows. Soil in which there is a good deal of vegetable matter, such as an old fence row chopped fine, would be a good material. Then, when the mound is shaped, pave the sides and top with *hard* brick, leaving a space of about four inches between each two bricks. Fill this hole (four inches square,) with rich earth, leaving the earth in the hole about horizontal, and set a plant in each, according to the above diagram.

While the vines are green, it makes quite an ornamental affair for a plat or square in the garden. Caleb Stabler. *Dayton, Mont. Co., Md., 8th Mo*., 12.

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Brine Poisonous to Animals.—Several years ago, Mr. Reynal, an eminent French veterinarian, urged that the brine in which pork and other meats had been pickled, was a deadly poison to horses and hogs. In proof of this, the Kentucky Turf Register says, "We were last week a personal witness to its practical demonstration. A gentleman in the village of Lawrenceport, Ind., emptied brine from a pork barrel into his lot. A flock of hogs, as also one horse, partook of it, and the result was, the horse, and seven hogs out of the nine, died in less than six hours from the time the barrel was emptied."

The Cultivation of Rye.

Looking into the statistics of the rye crop some time ago, we gathered some facts in regard to culture and uses, which may be of interest to our readers. We find it a prominent crop in the Eastern States—in amount superior to all the grains except Indian corn—and consumed largely as a breadstuff. It is grown quite extensively among the Germans in Pennsylvania, and also on the light lands of Ohio and Michigan, and other Western States. In some localities in the latter section, however, one object of its growth is the supply of winter pasture, as it may be fed down for some weeks in spring, with very little diminution in the product of grain, and affords a succulent green food at a time it can be obtained from few other sources.

The soil best suited to rye, in our experience, is a rich, sandy loam—the strong clays in which wheat delights seldom producing good crops of this grain. In such soils there is too much moisture—it better loves a warm light sand or gravel, too light for good crops of barley or oats. Good corn land will produce good rye, and it is often sown after this crop, the last of September. Sward land of the proper character of soil, is also employed in the production of this grain.

Probably the best preparation for sowing rye is a thoroughly tilled summer-fallow. Rye likes a deep, mellow soil, and one enriched by manure; and among the fertilizers which may be employed, a compost of muck and ashes would be very suitable to the requirements of both the soil and the crop. If stubble land is employed, manure should be given, unless the previous crop has received an extra dressing. Plow deep and well, and then by the use of the gang-plow or cultivator, secure a fine and mellow soil.

The middle of September is a favorable time for sowing and from one and a half to three bushels of seed are given per acre. The earlier it is sown the more it tillers and spreads, and hence the smaller quantity will be enough on a fertile soil, if sown at this season. When the growth is luxuriant, it may be fed off both fall and spring; but where much reliance is placed on this supply of pasturage, the greater amount of seed should be sown, and the better character of land given.

Rye, like most other grains, should be harvested before it is fully ripe; as, with wheat, the grain is heavier, and the product of flour of greater amount and value; beside there is considerable loss from shelling in the field if delayed too long. Careful handling is necessary—we have known large wasteage, when drawn by careless hands when very dry and ripe.

The average yield may be stated at twenty bushels per acre, though crops of thirty five are occasionally produced. Very often, however, a yield of fifteen bushels is as much as a heavy crop of straw will give, especially on land not well adapted to the crop from too great an amount of moisture. Its market value is usually a little above that of Indian corn—sometimes, however, it goes slightly below it, according to the crop of each.

Rye bread is esteemed a wholesome and palatable food, altough those accustomed to that made of "pure Genesee wheat," find it quite a different article. When mixed with Indian meal and baked a long time, it makes the famous "Rye and Indian" so well known in New-England, and which we seldom find in so great perfection elsewhere. The flour should not be too finely ground or closely bolted, and it is said that an aroma will be retained which is peculiar to this grain, and which renders it more palatable. It has a larger per centage of sugar than wheat bread, and retains its freshness longer even than that made of spring-wheat flour. We have noticed recently a statement by an extensive bee-keeper at the west, that rye flour is a valuable article for feeding bees in early spring, before flowers blossom sufficiently to supply their demands for food.

Rye is pronounced by competent authority a most valuable grain for feeding horses, cattle, and swine. For horses at hard work, and requiring hearty food, the Pennsylvania farmers give both grain and straw, the former coarsely ground and the latter cut, and both mixed together in a moist state, with good results. Less hay is eaten, and no other grain is required. Corn is sometimes ground with the rye, making a superior food for improving the coat as well as keeping up the strength of the horse. The same provender is valuable for fattening cattle. As early feed for swine, before the corn crop matures, we have used rye with the best success.

Rye straw is not well relished by stock, yet in some sections, near large cities, its market value makes it the best part of the crop. In Boston, it is said the price averages $15 per ton, though it is chiefly used for the bedding of horses. It is used to a considerable extent by nurserymen for packing trees, and we have found it excellent for littering yards and stables, and to add to the stock of manure.

Saving Clover Seed.

Properly managed, the saving of clover seed is no difficult matter, but many farmers must reform their practice in two respects—they must cut it earlier, and get it in sooner—as soon as it can dry sufficiently. A correspondent in one of the earlier numbers of the present year, (Co. Gent., March 3, '59,) gives cogent reasons for this recommendation, which we recall as seasonable just now. He says, "early cutting will often give better weather for curing; will prevent loss from shelling of the earliest and best seeded heads, and will give the straw and chaff much greater value as fodder for stock. We need not wait, I find, for all the blossoms to ripen—the later ones have little or no seed, and may better be cut green, so as to possess some value as hay. If merely allowed to lie in the swath until well wilted, the clover seed is cured sufficiently to draw at once to the barn."

When two-thirds of the heads have turned brown, is probably about the best time for cutting. A writer in the *Southern Homestead* says, that earlier, too many seeds are unripe, and later, much seed is lost in the field. He would cut with a reaping machine or cradle, turning the grass into double swaths to cure. We usually cut with a scythe in the same way, or if with a reaper, rake off in small bunches of a size to dry through readily. When cured, rake up when slightly damp, morning or evening, into small bunches, or pitch together with a barley-fork, and when sufficiently dry load carefully, and draw in. Let the moisture all dry off the grass before drawing in, or it will be liable to heat in the mow; but a little juice in the green stalks or leaves will do no harm.

In the freezing weather of winter, threshing and cleaning with the machine is readily performed. Or, if grown only for home use, it may be threshed with the flail, or trodden out with horses, and sown in the chaff, which is full as certain to "catch" as though cleaned ever so nicely. Farmers should raise their own grass seed when it is possible, and thus avoid seeding their farms to foreign weeds of different kinds, too often contained in grass seed bought at the seed-stores.

Bestow Something on Your Land.

Messrs. Tucker & Son—As an explanation of the above, I would state that an Irish gentleman, in making a tour in this country, called on me some twelve years ago. I found him very conversant on agriculture, and of course felt interested in him. After I had showed him all my growing crops, (wheat nearly ripe,) he said: "surely this is very grateful land." I asked him what he meant by that. He said, "sure you must see it recompenses you abundantly for what you bestow upon it, and it surprises me that other farmers don't bestow as liberally upon their lands, for surely where nothing is bestowed little can be taken from it."

Could I only write like a Webster, a Clay, or a Calhoun, I am sure I could convince farmers that it would be greatly to their profit to bestow more upon these lands. It would recompense them abundantly to bestow more dung upon it. I suppose polished writers would say apply ammonia, but every farmer understands what dung is, and many either don't know what ammonia is, or don't know that fermented dung produces it.

It is a fact, that good wheat crops cannot be raised on our lands here, unless dung is liberally applied. Bestow more labor upon the land, and it will recompense you abundantly. Land requires more labor now than it did when we had a *virgin* soil to till. It must be better or more thoroughly pulverized to make it produce good crops. Bestow lime upon the land, where it can be got at a reasonable rate. Bestow gypsum (plaster) liberally; it costs only a trifle; makes grass grow abundantly; makes cattle and sheep relish it, the grass or hay, better, and I have no doubt makes it more nutritious. Bestow salt to your growing wheat and barley. It makes a stiffer straw and a better sample of grain, and more of it; but first of all, *bestow draining* where needed.

At the same time you commence bestowing upon the land, begin bestowing upon your cattle and sheep; they will recompense you abundantly for what *you bestow upon them.* Bestow good feed, (good shelter in winter,) plenty of water, dry yards, and plenty of litter, and they will pay you abundantly. Bestow meal liberally to your fattening cattle and sheep. Bestow more or less meal to your store cattle and sheep through winter, according to the quality of your fodder, and they will pay you abundantly—your sheep two or three times over—1st, in wool; 2d, in the carcass; 3d, in the additional number and better quality of lambs raised Bestow liberally on your stock. In that way you are preparing to supply your land liberally with the *food it needs and must have. to make it grateful.* This I have practiced for a long, long time, and I know I am right in advocating it. I advocate nothing but what I have practiced and found profitable. Mind to cultivate your corn when very young; when it gets older it will take care of itself. But I write as if every farmer occupied a clay soil like mine; but bestowing thorough cultivation on other soils I think don't hurt them, neither will the bestowing of dung. John Johnston. *Near Geneva, Aug.* 20.

Grubs in Sheep.

A correspondent of the Michigan Farmer communicates to that journal what he says is a perfect cure for grubs in the head of sheep:

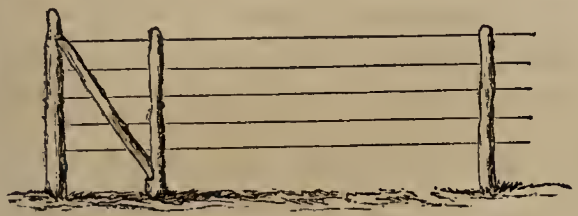
"Take one quart of whiskey, and two ounces of yellow snuff, mix and warm to blood heat. Let one man hold the sheep, and another take a small syringe and discharge about a teaspoonful of the mixture into each nostril. It is a certain cure. My father met with quite a loss in his flock; he tried this remedy, found it satisfactory, and never lost another sheep."

Selection and Use of Muck.

Eds. Co. Gent—The question is often asked, "Why this wide discrepancy in the results produced by muck in the hands of different experimentors?" The answer is sought in the different modes of using it, but the character of the different muck deposits varies greatly. Most muck, as it comes from the swamp, is not decomposed. There is a process by which vegetables so far decay, as to lose all strength and firmness of film, so that they will fall to pieces in your hand, and yet have not suffered that decomposition which fits them for food for other plants. True, decomposition requires heat, moisture and air, and all in due proportions. Hemp and flax are often "rotted" in cold water. Leaves may be found in quantities in brooks and shallow water, retaining perfectly their form, and yet so "rotten" that they yield to the gentlest handling; but they are not decomposed, moisture has been in excess, while, probably both heat and air have been deficient. The gum and other extractive matter have been dissolved out, and if any chemical action has taken place, it would seem to arise from the decomposition of a small portion of water, giving off its hydrogen and taking the oxygen, and forming an acid. In this condition most muck is found. It is a mass of sour vegetable matter decayed, but not decomposed, and must be exposed to the action of heat and air before it is prepared to nourish vegetable life. This is a wise provision of nature. Did each animal accumulation suffer a full decomposition, its valuable parts would be taken up, and rendered by water and atmospheric agencies to a far greater extent than at present. Those shallow muck deposits, which are dry some months in the summer, usually act more readily, but less permanently, than the deeper deposits. It is a question, also, whether the brier orders of plants—the nitrogen bearing plants, which abound in deep swamps, do not give a richer muck than leaves and vegetables of a higher order.

But there is another thing which influences the character of muck in a very high degree. I refer to the rocks and rocky portion of the soil on the hillsides surrounding the deposit of muck. The man who has not often knelt on the surface of a rock, or on the upturned soil, and looking, *looked to see* how the frosts of winter, and the warm suns of summer, and the chemical changes of the atmosphere, were crumbling and disintegrating, not only the face of the massive ledge, but the smallest pebbles of the soil, and preparing mineral or inorganic food for vegetable life, has lain unmindful of one deep source of gratitude due to his Creator.

Very firm rocks or stones are made of a single ingredient, and no matter how indestructible one of the parts may be, if it is combined with a destructible ingredient, the mass will crumble. Very many rocks take a little iron into their composition. The particles of this will become *rust*, and be washed out; water will fill the cavity, and freezing expand and crumble off the particles around it. Some of the lime stones decompose rapidly from this cause. Granite is composed of quartz, feldspar and mica. Pure quartz is affected but from charcoal agents, but feldspar contains eight to twelve per cent of potash; mica also contains potash, and both are highly compound, often decompose readily, and give their ingredients to the soil. Mica slate—a very common rock—abounds in mica, and often, perhaps usually, contains some iron. The most valuable beds of muck we have ever known, receive the wash of grounds whose rocks and stones were rapidly decomposing, and whose decomposition afforded potash or its kindred elements. Any alcali thus deposited with the muck should in a measure, at least, prevent the formation of acids, and render it to some extent similar to that which has been composted with ashes. These suggestions may aid some one, both in the solution and treatment of muck. S. Reed.



Grape Trellis.

In answer to several inquiries, we give the above cut representing the mode of constructing wire trellis for grapes, as adopted by Dr. **Farley** of Union Springs, in his excellent vineyard at that place. The posts are white cedar, mostly round and rough; they are set in the ground about two and a half to three feet, are seven feet high above ground, and twelve feet apart. At the ends, they are braced as represented on the left portion of the figure, the powerful stress of the wires requiring a firm support. The wire, which is No. 10, is placed about 14 inches apart, the bottom one about two feet from the ground, and the upper about six and a half to seven feet high. At the ends, the wires pass through or around the posts; they are attached to the intermediate ones by staples. The vines are trained on this trellis mostly in the fan form, and where necessary are fastened to the wire by cotton cord.

The cost of this trellis is 75 cents to one dollar per rod. The cut represents only one length between posts, besides the end-bracing.

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Agricultural Transactions.

Transactions of the N. Y. State Agricultural Society, with an abstract of the Proceedings of the County Agricultural Societies for 1858. Vol. XVIII. Albany: C. Van Benthuysen, 1859. 8vo., pp. 855.

The recently published volume of our State Society's Transactions, prepared under the direction of Col. **Johnson**, the able Secretary of the Society, is one of the most valuable which has appeared, and the contents are of especial importance. These volumes convey the experiences of our best farmers, and we are glad to know that they are not only highly valued and appreciated by the people of our own State and Country, but that abroad they are received with favor and sentiments of gratitude, as we have evidence in letters which are received from the most eminent and practical cultivators in Great Britain, by the Secretary of the Society.

Besides the abstracts of the doings of the various County Societies, and the farm reports, the present volume contains several valuable papers, which we will briefly mention: The address of **Joseph R. Williams**, Esq., President of Michigan Ag. College, on "Agricultural Education;" "Edible Fishes of New-York," an essay by **Robert L. Pell**, which received the $100 premium of the Society, upon the "Natural History, Habits, and Artificial Culture of our Edible Fishes"—it is a useful article; "A Treatise on Fencing," by **S. Edwards Todd**, follows—this is copiously illustrated, and is written in a plain common sense way. An interesting article is given in the report of experiments with different manures on permanent meadow land, as made by **J. B. Lawes**, F. R. S. It will be found of special value to graziers and dairymen. Dr. **Fitch's** fifth report on the "Insects Injurious to our Forest Trees," will prove of great value to all who take an interest in the preservation of our forests. Dr. **Gerstacker**, an eminent entomologist, in speaking of the reports of Dr. **Fitch**, says: "If the Society had done nothing beyond the publication of these studies respecting insects injurious to trees, it would have made an ample return for all the money it had ever received." The condensed reports of our County Societies and correspondence, contain much useful information.

Such is a brief abstract of the contents of this volume. It is well printed, and illustrated with several portraits of the finest stock in our State. For the volume we are indebted to the kindness of Secretary **Johnson**.

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Black Tongue.

Messrs. Luther Tucker & Son—Do you know anything of a disease in cattle called *Black-tongue?* If so, what are its symptoms? Is it generally a fatal disease? What is the most successful treatment of it? Is there danger to persons using the milk of cows that may be taking it, though not far enough advanced to discover it? **J. A. Galbraith.** *Greenville, Tenn.*

Black tongue, according to Dr. Dadd, is the most severe form or termination of *Blaine.* The following are his remarks on this disease:

Blaine.—Some veterinary writers describe this disease as a "watery tumor, growing at the root of the tongue, and threatening suffocation. The first symptoms are foaming at the mouth, gaping, and lolling out of the tongue."

The disease first originates in the mucous surfaces, which enter into the mouth, throat, and stomach. It partakes somewhat of the character of thrush, and requires nearly the same treatment.

Make an infusion of raspberry leaves, to which add a small quantity of borax or alum. Wash the mouth and tongue with the same by means of a sponge. If there are any large pustules, open them with the point of a penknife. After cleansing them, sprinkle with powdered bayberry bark, or bloodroot. Rid the system of morbid matter by injection and physic. The following antiseptic drink will then complete the cure:—

Make a tea of raspberry leaves by steaping two ounces in a quart of boiling water; when cool, strain; then add

Powdered charcoal,	2 ounces
" bayberry bark,	1 ounce
Honey,	2 table-spoonfuls

Give a pint every four hours.

The diet should consist of scalded meal, boiled turnips, carrots. &c., to which a small portion of salt may be added. If the glands under the ears and around the throat are sympathetically affected, and swollen, they must be rubbed twice a day with the stimulating liniment.

The disease is supposed by some veterinarians, to originate in the tongue, but post mortem examinations lead us to determine otherwise. Mr. Youatt informs us that "post mortem examination shows intense inflammation, or even gangrene, of the tongue, œsophagus, paunch. and fourth stomach, The food in the paunch has a most offensive smell, and that in the manyplus is hard and dry. Inflammation reaches to the small intestines, which are covered with red and black patches in the cœcum colon, and rectum."

We would adyise no person to use milk from a diseased cow, but we cannot say how great the danger would be.

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Lemon Pie.—No. I.

One lemon, one teacup of sugar, 2 eggs, 3 tablespoons of flour, 1 teacup of milk. Grate the rind of the lemon; put the sugar, flour, rind, the juice and the *yolks* of the eggs together; add the milk the last thing. Pour this custard into a deep plate lined with a paste and bake. When done, spread over the top the *whites* of the eggs beaten to a froth, and sweetened with 4 table spoonfuls powdered sugar; then return it to the oven and brown slightly.

Lemon Pie.—No. 2.

One large or two small lemons, 3 cups of sugar, two-thirds of a cup of flour, 2 cups cold water, 2 eggs, a piece of butter the size of an egg. Put the flour, sugar, and eggs together, then add the juice, grated rind and water, and the butter (melted.) Bake in a deep plate without an upper crust. L. E. R.

U. S. Fair, Chicago.

[Correspondence of the Country Gentleman.]

Chicago, Sept. 15, 1859.

Editors Co. Gentleman—The great Fair of the U. S. Ag. Society is now in full operation, and in extent of stock, implements, and other articles, is decidedly, I think, superior to any other ever held by the Society. The grounds are much too large for a ready examination. The stock are arranged in stalls around the outer fence of a 60 acre enclosure, and you can well imagine what a walk is required to encompass this feat. In fact a day might well be employed if anything like an examination be made of the cattle and horses in their stalls, and in no other way can the examination be had except by occupying three days, when they will be exhibited in the trial rings. To facilitate, however, this work, an *omnibus line* has been started *in the grounds*, to pass round these stalls, so that a ride will relieve somewhat the tedium of the way. The arrangements were not fully completed on Tuesday night, but every effort was made to have the buildings open for examination, and the exhibition was in progress on Wednesday. The stock of cattle was in the main, I think, a very superior one. Many very choice cattle of the various breeds were shown, and he must be fastidious indeed that could not be satisfied with superior animals exhibited in each of the classes. The show of implements was a very excellent one, and did great credit to the exhibitors and to the Society; and I consider, in variety, extent, utility, and adaptation to the wants of the farmer, I have never seen this exhibition surpassed.

The Horses were a failure so far as anything like first-rate quality was concerned. The Sheep and Swine however made up for the deficiency in horses. The miscellaneous department was not what could have been desired, yet taken together, under all the circumstances, was very fair. The people, however, were here in all their power. On Wednesday 30,000 were estimated to be on the ground, and the receipts, over $6,000, would seem to justify that number. On Thursday the numbers in attendance were variously estimated from 40 to 50,000. As I have not the receipts at the gate, I cannot say whether these estimates are too large, but it is very evident there were many more than yesterday.

Fawkes' Steam-Plow, and a new competitor, Waters, from Detroit, were on the ground to-day, and turned up furrows enough to show what can be done. Waters is first tried here—and cutting, as it did, about fifteen feet in width and six inches deep, and turning over the sod well, my own impression is, it gives hopes of success. I cannot give you a description of it, but I think well of its start. To-morrow the plows will be tried, if land can be secured, for the prize of the State Society, the Illinois Central Railroad, and the United States Society, and the interest in the success of the machines is very great. May the result be propitious, and the great West satisfied that their expectations are to be crowned with success.

The receipts up to this evening, I judge will be nearly if not quite $18,000—and if to-morrow and Saturday are favorable as to weather, the receipts will probably exceed $25,000—and this, after paying premiums, would place the Society in funds—unless the large expenses, outside of the liberal contributions of Chicago, shall very materially encroach upon the funds.

The opening address of President Tilghman, the responses of Gov. Crittenden of Kentucky, and Senator Douglass, were very happy and well timed, and up to this hour, all things have gone along as well as could have been expected.

I have constantly been engaged on committees, and have had little leisure to examine critically many things, which I hope to do to-morrow. I have met old friends from every section, but New-York. I find men in all the west, who meet me on the grounds and in the streets, and I feel that though this is a great country, we are brethren still, and New-York is remembered with great interest by those who commenced their career there, and are now among the active and efficient farmers, merchants and mechanics of the Western States.

The officers of the society present—Gen. Tilghman, Prest.; Hon. Henry Wager, Chairman Ex. Con; Mr. McGowan, Penn., Mr. F. Smith, of New-Hampshire, Mr. John Merryman, Maryland, Member of Com., Ex-Prest. Wilder, Mr. Brooks, V. P., Mass., Mr. Johnson, N. Y., Mr. Kennicott, Ill., Mr. Byington, Iowa, Mr. Poor, Sec., Mr. French, Treas., Col. Capron, Supt., and many others, whose names have escaped me for the moment, are all engaged upon the business of the Society. I must not forget Col. Ware, of Virginia, who has done good service during the whole Fair. I regret that I have not time to give more details which might be interesting, but hope to do so hereafter.

The United States Fair closed its seventh annual exhibition, at Chicago, last Saturday. The attendance was large throughout, and the receipts heavy; the three first days it being $18,000, and the fourth day over $10,000. The show and trial of steam plows was one of the important features, the result of which has not been learned. [P. S.—We learn that the entire receipts amounted to about $30,000.]

Dayton and May Wheat.

The Dayton Wheat.—L. Braden, of Junius, Seneca county, gives in the Rural New Yorker, his experience for the two seasons past, in growing this variety of winter wheat. The seed he obtained in Ohio, and sowed it the last days of September; the result was, it was fit to harvest as early as the Mediterranean. "The last season," he says, "I sowed the 1st and 2d days of September—harvested July 13th. The yield of the present season has been good—from 30 to 47 bushels per acre. While the Mediterranean was all down, the Dayton stood up and was nice harvesting; that, I think, is one very important item for every farmer, and another is, it belongs to the white variety of wheat. Mine has been grown on land previously planted to corn, then barley, then wheat, and rather light land at that, with but little manure, and the yield this year is 30 bushels to the acre for 13 acres."

Tennessee May Wheat.—This variety, which is identical with the Missouri wheat grown by John Johnston and noticed heretofore in this paper, receives the following notice in the same paper. Mr. James White, of Palmyra, N. Y., raised the present season 25 bushels per acre, sowing it after corn, on the 23d of September. He calls it the *Tennessee May Wheat.* The berry is small, color amber, or between red and white, straw stiff and short, and will bear to be sown upon stronger land than the Mediterranean. Mr. W. adds:

"When sown the 25th of September, it was ready to cut 8th July. It seems inclined to head out very early, (some of mine was in full head on the 10th of May,) which I think will be its principal advantage over the Mediterranean in escaping the midge. I suppose that there is not a question about its flouring qualities, as it is well understood that the fancy brands of early southern flour are made from wheat of this variety. I do not think it will be likely to yield quite as heavily as the Mediterranean, or other coarse kinds, but should it prove earlier upon further trial, will be valuable, as the midge, even this season, was very abundant in all late spots in fields of the different kinds of wheat grown about here, but came too late to do much damage."

The Kent County Show, England.

In the letter of our associate, published this week, will be found a brief notice of the Cattle Show of the County of Kent, England. From the full account of the exhibition, together with the report of the dinner speeches, published in the *Kentish Journal* of Aug. 27, we make the following extract:

The noble Chairman (Lord SONDES,) after returning thanks for a complimentary toast proposed by the Marquess Camden, concluded by giving the health of Mr. TUCKER, an American gentleman, the editor of the *Country Gentleman*, who had come to this country to acquire information on the subject of English agriculture. (Cheers.)

Mr. TUCKER, in responding, said it was only yesterday that he left a town in the midland counties, not perhaps as celebrated as some others in the annals of war or history, for the genius of its sons or the grandeur of its scenery, but still it was a household word the world over, for where was there a thirsty soul who had not laved his parching lips with the ales of Burton-on-Trent? (Cheers and laughter.) To come from Staffordshire to Kent was only like stepping from the brewery to the hop-garden; and in acknowledging the kindness they had shown to him he must thank them for every draught of ale which his countrymen had drank, flavored with the product of the tillage of the agriculturists of Kent. (Cheers.) The Chairman had alluded to the fact of his having come to England to look at their agriculture, and he might take that opportunity of acknowledging that hospitality which had enabled him to see something of English agriculture, as he hoped to his own advantage, and as he should endeavor to render it to the advantage of his countrymen. (Cheers.) The agriculturists of England had lavished their capital with a liberal hand in the advancement of that science. They had sent to the farthest climes for fertilizers to apply to the soil, and they had sent to America for cake to feed their cattle and sheep. From every field tainted with the suspicion of wetness the surplus moisture was carried off, and sometimes conveyed to early meadows with advantage; and by working up the heavy clay and its application to the sandy soils, they had recreated or redeemed, agriculturally, the island in which they lived. (Cheers.) Under these circumstances the foreigner could not but study with advantage the system of agriculture followed here, even although it might not answer if transferred to distant soils and under different skies. (Hear, hear.) He should not only carry back the lessons of farming which he had learnt in England, but also the more delightful recollections of that and similar occasions when such kind regard had been shown to him as the representative of their brethern in America; for, like Englishmen, they looked back to the glory and achievements of olden time, and he hoped America might regard herself as an ally with England in support of free institutions and of true liberty wherever it might find an assailant. (Cheers.)

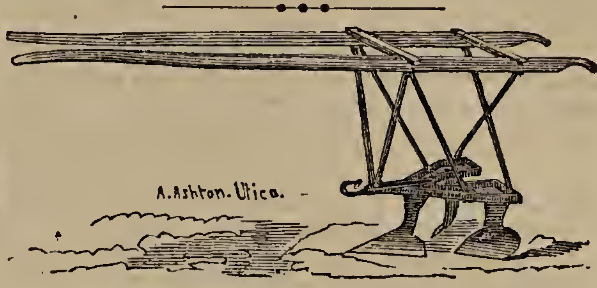
Wheat and Chess.

THE FIVE HUNDRED DOLLAR PREMIUM NOT CLAIMED.

Early last autumn we agreed to offer such a premium for a stalk of wheat and chess from the same root, as the owner of such a specimen might desire. The amount of this premium was subsequently fixed at *Five Hundred Dollars*—the applicant to deposit one hundred at the time he made the application, as a guard against needless annoyance; if the specimen proved genuine, the hundred dollars was to be returned to him, with the five hundred; if it proved to be an imposition, he was to forfeit the hundred.

We have heard of several specimens such as the premium was offered for, but not one of the stoutest advocates for transmutation has had sufficient confidence in his own theory, to make the deposit required, and which there was no danger of his losing if he was right.

The time has now expired for which the offer was to continue; and as we have repeated it several times, and for a whole season, we take it for granted that all the specimens of which we have often heard, are humbugs, and we hope none will hereafter claim that such have ever existed.


A.Ashton.Utica.

Alden's New Cultivator

We have recently made a thorough trial of Alden's new Thill-Cultivator, and find it an admirable implement. The use of the thills gives an efficiency, thoroughness, and accuracy in working, that render it in this respect superior to any other cultivator we have tested. A man with a horse will do twice as much work in a given time on stiff soils as with the common cultivator; and the perfect control which the operator has of its depth of running, and the closeness with which he may cut to the rows without danger of striking or injuring the plants, almost supercedes the use of the hoe in any case.

The engraving nearly explains itself—the horse is attached to the hook in front of the teeth, the thills being merely to steady it. It is more easily managed than the cultivator of common construction, is less fatiguing to the operator, and appears to be easy for the horse. With Sayre & Remington's excellent steel teeth, we would recommend it to our readers as the best cultivator we know. It is made by Milton Alden of Auburn, N. Y., at a moderate price.

Remedy for Twitch Grass.

This is one of the thousand and one names by which this pest is known. Several years ago I had a piece of land that wanted to be taken up, but it was so full of the roots that I dreaded the job; but about the same time I saw a piece in an agricultural paper, that the editor had killed it by planting the land to potatoes, and after they were dug he turned a drove of pigs into the field. So I tried it, and with perfect success. The land was so full of roots that I got but a small crop of potatoes, but the next spring when I came to plow the land, there was none to be seen. If any farmer has his farm as full of it as mine was, let him try this and he will gain two things—fatten his pigs and rid himself of this pest. SAGADAHOC.

To Prevent Cows Kicking.

My plan to prevent cows from kicking, I think much better than J. C. R.'s in Co. Gent. of 25th of August, or at least more easily applied. Tie a cord or small rope around the body of the cow, just front of the hips and udder, drawing it pretty tight, when you can go to work milking without fear or trembling. In time the cord may be merely laid over the animal's back with the desired effect; at least such has been my experience. W. W. G. *Woodbury, N. J.*

Raising Cabbage Seed.

Messrs. Tucker & Son—I take the liberty of addressing you, to state some facts which might probably satisfy B. L. S.'s inquiry in No. 7 of the Country Gentleman, concerning the raising of cabbage seed.

Having been for some time in the employ of Messrs. J. G. Meyer & Bro., in Ulm, Germany, where seed growing was the most extensive part of the business, I cannot, so far as my own experience goes, agree with what the Prairie Farmer has seen asserted.

For the sake of experience, it had been tried for several successive years to raise seed of the Brassica family, (Br. rapa virridis caulorapa, khbrabi excepted,) of stumps, but there was little difference, if any, in the size or quality of the cabbage raised from such seed, and from such where the cabbage had been planted out with the head. The only difference is in the seed itself, which don't produce quite as much quantity from stumps, and the size is not quite as fine and large as that raised from the whole cabbage plant. But it is a well known fact that the small sized seeds of German stocks, balsams, etc., make more double flowering plants than the single, and are equally thrifty. So it is, to my knowledge, with such cabbage seed. If there is no superiority, there is at least equality in the result of either planting. With us, however, the supply of cabbage in autumn was always larger than the demand, so we as a general thing planted out cabbage with the head on.

With the raising seed of the Savoy, of which immense quantities are raised in Ulm, and for which this locality is justly celebrated, it was different. The heads being always in demand, and often sent off in quantities to great distances, they were all taken off, and of those which had been the finest heads, the tops of the stumps were marked with a cross cut, to be saved for raising seed.

When frost set in, these stumps were removed to the cellars, planted out in spring, the weak growing branches broken out, and the result is a quality of seed which, wherever Savoy is known and cultivated, is celebrated and preferred, and never produces clump-footed Savoy on that account.

In this manner all the Savoy seed has been raised in Ulm for quite a number of years, and if the Brassica sabanda (Savoy) gives such results, I don't see why Br. capitata of the same family, should be doing the contrary. L. P. *Bloomington, Ill.*

Potato Yeast.

We can all appreciate good bread, and I believe almost every person *knows* good bread from poor. I think once I have seen an exception, for the family with whom we boarded *never* had good bread upon the table, and *never* made any remark about the bread, so I conclude it was a thing unknown to them. If at any other table they met with the *article*, (good bread,) it must have been considered something else than bread. But you cannot have good bread without pains taking. The most important thing next to the *flour*, (which I take for granted is good,) is the yeast. I have used various kinds of yeast, and have come to the conclusion that the potato yeast will *invariably* insure you good bread if you have good flour. Take two quarts of water, and cut into it six large potatoes, (peeled of course ;) let them boil till soft, then pour the boiling water from them on a pint of flour ; mash the potatoes and rub them through a seive, then add half a teacup of brown sugar, a tablespoon of ginger, a table spoon of salt. If this mixture should be thicker than the ordinary hop yeast, pour in some hot water to make it as thin as you wish. When nearly cold add the yeast. I use two cakes of the "Groton yeast," which I suppose to be equal to a teacup of good hop yeast. When light, put this into a jar and set in a cool place. When taken out for bread it should always be stirred well. For four good sized loaves of bread I use one pint of this yeast and one quart of new milk. The bread can be made at night with new milk, and will be ready to bake early in the morning. It should be well kneaded and soft. Half water can be used if you have not milk. This yeast will keep three weeks. When it is sour, as it will be, use a teaspoonful of salaratus, but do not put it into the yeast, but into the bread. If it becomes sour it is better to take fresh yeast to start with again, than to use some of the same. L. E. R.

New Seedling Pie Plant.

Editors of the "Country Gentleman"—We send you to-day, by express, a small package of Pie Plant. It is from a seedling of our own raising. Please give it a trial. We have tested it repeatedly along with the Linnens, Cahoon, and Victoria varieties, and we think it superior to either of them. It is less acid, and at the same time equal, if not superior, to the Linnens in flavor. It is fine grained, tender, and very free from the peculiar *rhubarb* taste. Its size is very large.

The stalks we send you are rather short, owing to being grown from quite small crowns, transplanted late last fall. They will, perhaps, give you some idea of the plant. Theodore L. Pitt. *Oneida Community, Oneida, N. Y., Aug.* 22.

The package reached us safely, and the variety is certainly all that it is represented to be in the letter accompanying it, published above. The stalks are of good size and very solid, and the flavor excellent, closely resembling that of a good pie apple. We think it worthy of dissemination.

Patent Hives.

Farmers have probably been more generally disappointed in the purchase of patent hives than in any other article. In the purchase of patent machinery, or almost any thing, you can see it tested and judge of its merits before purchasing ; but with hives, the purchase is mostly and or necessity made on faith, and the buyer generally has only a vague and mysterious idea that somehow (he cannot tell how exactly,) he will realize all he has been told by the patentee or his agent, and he invests and waits patiently a season or two for the fulfillment of those promises, and *then* almost invariably regrets his outlay.

I desire here to give a little advice, and a few words of caution to those who believe too readily what they hear from patent venders.

First Before purchasing a patent, ascertain from *reliable* authority, the opinion of men of long experience, who keep a large stock of bees for profit, and whose honey may be seen for sale at almost every corner in our large cities ; if they use, or if they recommend that patent *disinterestedly*, then you may venture, but with considerable caution, to give the hive a trial on a small scale.

Give no heed to the name, however pretentious and captivating, nor to the ills they insure against. Without remarking upon their merits, I will give a few of the titles : "Combination Hive," "Common Sense Combination," "Moth Destroyer," "Moth Preventative," "Non-Swarmer," "Artificial Swarmer," "Dividing," "Storifying," "Moisture Condensing Hive, &c. When we add to thiss "artificial feed," and "*A Restorative Drink for Hot Weather*," the comfort of the bee seems to be well provided for. The last discovery ought to find a good many advocates among those who like a little something warm, but who do not restrict themselves to "hot weather" in the use of the "restorative."

Secondly. Consider whether you can make the hive, or get it made at a reasonable price. Almost all patent hives are made of boards of several thicknesses, slides, glass, &c., which cannot be readily obtained in every neighborhood, then the dove-tailing, and many points of construction, can only be well done by a carpenter, and not profitably, without the aid of machinery. The question is, will it pay? I have known persons to purchase a patent of difficult construction, and who never, consequently, made the hive ; so their "individual or farm, right," was of no advantage to them. Look well to simplicity of construction before purchasing.

All experienced bee-keepers will agree, that as good results have been obtained, in many instances, from the common box hive, or even from a section of a hollow log, with a surplus honey box or boxes, as from any patent in existence. All we can, beyond this, reasonably hope for, is *to attain more uniform results.*

It is evident this can only be accomplished by well directed observation and care, and a perfect control of the comb and colony.

The simplest means of doing this in all its details, is now occupying the attention of a large and more intelligent class of observers than were ever before enlisted in bee culture, and we may look forward confidentially to the full developement of a system of management, within a short period, that will make bee keeping as safe, pleasant and profitable an investment as that of any other stock, fluctuating, of course, in prosperity with the season. E. P. *New York.*

Turkey Breeding.

Few turkey-breeders are aware of the superior advantages of retaining old birds for breeding purposes. The most of our farmers dispose of their old turkeys, as they call them, every fall, which is in fact at least two years before they have reached their maturity, and just so long before they have arrived at the best age for breeding purposes. Audubon, the distinguished American Ornithologist says: "The third year, the male turkey may be said to be an adult, although it increases in weight and size for several years more. The females at the age of four, are in full beauty." The naturalist was then speaking of the wild turkey; but as all our families of domestic turkeys have descended from the American wild, not more than about three hundred years ago, and frequent crossings are known to have been made from that time down to the present, it is but reasonable to suppose that the law of growth, that governs the wild turkey also to a great extent, controls the domestic. Indeed, domestication has only changed the color of the plumage. No breeder of sheep would think of improving his flocks by disposing each year of all his old sheep and breeding only from lambs, yet he would be quite as wise as he who annually retains only young turkeys for breeding purposes, for the sheep certainly reaches its maturity as soon as the turkey.

Old hen turkeys do not lay as early in the season, nor as many eggs as young birds, but the young chicks are so much stronger, hatched from the eggs of the old bird, that with ordinary care, more young as well as better, will be raised in a season from the old hens.

Select the earliest hatched, largest, and best formed turkeys for breeding purposes—securing a male not related to the females, if convenient. Keep the hens until seven or eight years old, or so long as they continue to lay well, and keep the males until three or four years old, and our word for it, the breeder will be satisfied with the result, for we have seen it tried.

Feed but moderately during the winter—more generously towards spring, and plentifully during the laying season, when good hens will lay from thirteen to twenty-five eggs the first litter. These may be hatched with advantage under large hens, especially any of the large Asiatic family. The turkey will soon commence her second litter of eggs, which in number will nearly equal the first. A young hen of ours, that weighed about fifteen pounds, has this season layed over fifty good eggs. Let the turkey sit on her second litter of eggs, which she ought to bring off early in July.

When the young turkey chicks or poults come off, which will be in from twenty-seven to twenty-nine days, do not go to stuffing them with dough, allspice, pepper, nor anything else, for they need nothing but warmth for the first twenty-four hours. The second day, give a little hard-boiled egg grated finely, four or five times, and nothing else. Continue the egg daily for three or four weeks. The curd of sour milk, made by scalding the milk with a little water, letting it settle, and straining off the liquid, makes an excellent food to alternate with the egg, after the poults are a few days old. A little stale bread broken finely, may also be mixed with the curd or given separately. After the young are four weeks old, they may be fed with soft feed to advantage, such as scalded corn-meal, oat and barley-meal scalded; but these meals are poor feed wetted with cold water. It is also recommended by many successful breeders, that pans of sour milk be placed where the young turkeys may drink of it as often as they please.

Any person can raise turkeys who will feed often when young, and of only fresh, nourishing feed; and will also keep the cups clean, and the poults out of rains and dews until at least two months old. D. S. H.

The Creameries of Orange County.

According to the writer of a series of articles in the *N. Y. Tribune*, on the "Orange Co. Milk Business," there are four dairy establishments in Orange Co. which send sweet cream to New-York city, instead of milk, and employ the skimmed milk in making cheese for exportation. From the source above we gather some facts in regard to the business.

The largest creamery is that of Foster Clark, whose farm comprises two hundred and ten acres, and who really keeps thirty cows in summer, and forty in winter. They run to pasture in summer, and are wintered on hay, one-half of the amount given being cut and then moistened and mixed with corn and oats ground together. Mr. C. has been in the cream business for four years, having previously sent milk to the city, and occasionally a mess of cream. Finding the latter more profitable, he has gradually worked into his present mode of disposing of the product of his cows, carrying it on with systematic neatness and good management.

Immediately after milking, "the milk is strained into coolers—the long tin pails 18 by 4 inches—for the cream to rise. The coolers are set in cold spring-water vats, constructed in the dairy house, where they remain for 12 or 24 hours, or until the animal heat is thoroughly expelled. The cream is skimmed off and put into ordinary milk cans, which, when sent to market, are set in wooden tubs, so large that four or five inches thickness of ice can be packed around the cream can. Kept cool in this way the cream reaches the city, even in the hottest months, perfectly sweet." Ten quarts of milk furnish one quart of cream, and Mr. C. sends forward three hundred to four hundred quarts daily, of his own production, besides, in the height of the ice-cream season, large quantities are purchased from neighboring dairymen.

The average product of milk per cow in Mr. Clark's dairy is ten quarts, yielding one quart of cream, a better result than is ordinarily obtained. At some other creameries, however, more cream is realized, either by closer skimming or from richer milk—one quart of cream to eight quarts of milk—and even to six quarts—being the frequent proportion.

The skimmed milk, as remarked above, is made into cheese in the usual way, but the product is said to be mostly exported to the South, the less buttery character of the cheese fitting it better for keeping and use in a warm climate. These cheeses are made usually of about 35 pounds weight, and the average price obtained is seven cents per pound.

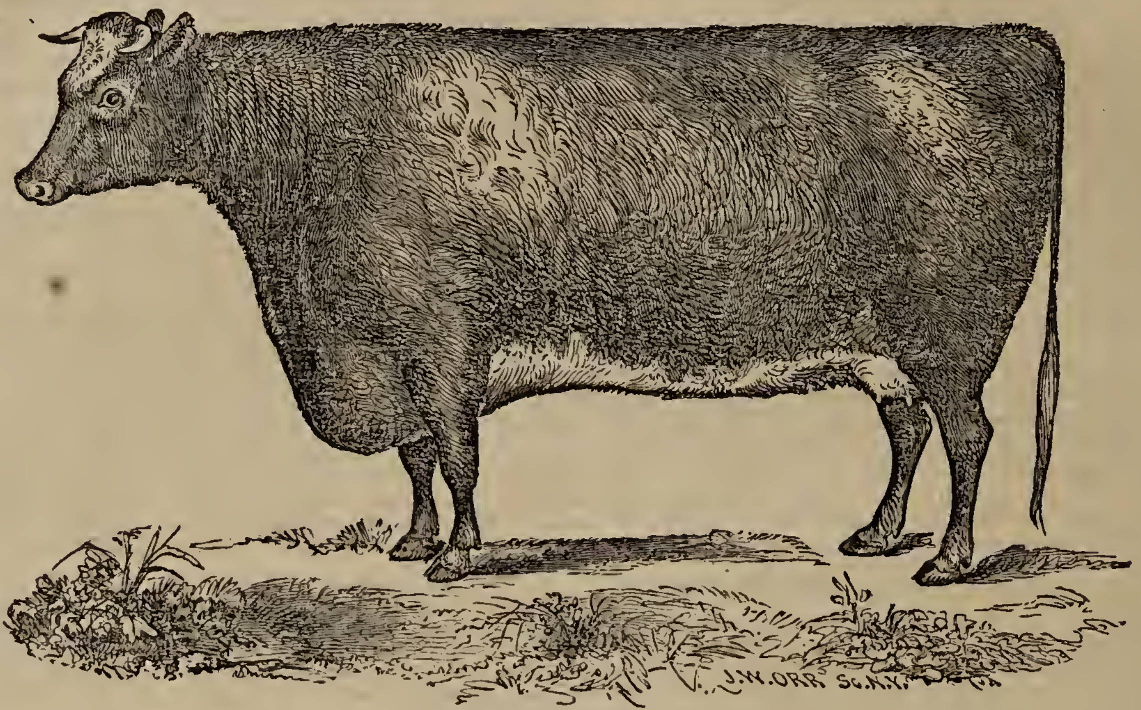
Manner of Milking.

We have always believed that this part of farm work is performed in a careless and indifferent way, and it is also a fact that milking so done must produce very serious results upon the usefulness of the cow. The following remarks which we condense from a recent English agricultural journal, not only show this important fact, but point out the way in which it should be performed. Very often upon our farms this is left for the "hired man" to do, who has no interest to accomplish it in the right way; but if he must do it, give him ample time, and have it done in a faithful manner, as here shown:

The manner of milking is a more powerful and lasting influence on the productiveness of the cow than most farmers are aware of. That a slow and careless milker soon dries up the best cows, every practical farmer and dairyman knows. The first requisite of a good milker is, of course, the *utter cleanliness.* Without this the milk is unendurable. The udder should, therefore, be carefully cleaned before the milking commences. The milker may begin gradually and gently, but should steadily increase the rapidity of the operation till the udder is emptied, using a pail large enough to hold all, without the necessity of changing. Cows are very sensitive, and the pail cannot be changed, nor can the milker stop or rise during the process of milking, without leading the cow more or less to withhold her milk. The utmost care should be taken to strip the last drop, and do it rapidly, and not in a slow and negligent manner, which is sure to have its effect on the yield of the cow. If any milk is left, it is re-absorbed into the system, or else becomes caked, and diminishes the tendency to secrete a full quantity afterwards. If gentle and mild treatment is observed and persevered in, the operation of milking appears to be one of pleasure to the animal, as it undoubtedly is; but if an opposite course is pursued—if, at every restless movement, caused, perhaps, by pressing a sore teat, the animal is harshly spoken to—she will be likely to learn to kick as a habit, and it will be difficult to overcome it afterwards. To induce quiet and readiness to give down the milk freely, it is better that the cow should be fed at milking time with cut food, or roots, placed within her easy reach. The same person should milk the same cow regularly, and not change from one to another, unless there is special reasons for it.

A Cure for Corns.

Have your shoemaker make your boots tight as you can bear on the lower part of the instep, to keep your foot from shoving forward—tack a piece of leather on the last where the corn comes, to raise it a little, and your corn will starve to death. Try it, ye cripples. It is a better remedy than chewing tobacco. S. M. Reynolds.



Short-Horn Cow "Bloom."

The property of Col. Wm. H. Slingerland, Norman's Kill, Albany Co., N. Y. Imported by Col. Morris.

Red Roan, calved Jan , 1850—bred by Mr. Fowle, North Allerton, Eng. Sire Sir Leonard (10827)—dam Elvira by Acolus (3733)—g d. Golden Pippin by Belvidere 2d (3126)—g. g. d. by Alive 0—g. g. g. d. by Eclipse (236)—g g. g g d. by Charge's Gray Bull (872) g g. g. g. g. d. by the Paddock Bull (477) g. g. g. g. g. g. d. by Brown's Red Bull (97)

Bloom was the winner of the 1st prize at the New-York State Show in 1854, and is mother of Samuel Thorne's celebrated heifer "Gloster's Bloom."

Drainage Lengthens the Season.

One beneficial result claimed for thorough drainage is that "it lengthens the season for labor and vegetation"—an "extension" which the crops and the farmer needs as often as the customer of banks and brokers. That the time required for the "settling of the soil" after the winter frost passes from it, depends to a great extent upon its porous or its retentive character, is everywhere known and conceded. The deep gravelly loam is seen to be very soon free from water, while the heavy clay requires a long time to become fit for cultivation. In the one case the soil is fully drained—in the other the water mostly passes off by the slow process of evaporation. Thorough drainage of the heavy soil renders both alike in this respect, and thus adds from ten to fifteen days to time of preparation for seeding—giving the same increased time for the growth of the crops to which the land is devoted.

We have the testimony of various practical farmers on this question, and none more to the point than the following: At an agricultural meeting in Boston, Mr. B. F. Nourse, of Orington, Me., who was present, said that drainage on his farm "had put his springy, cold lands in good working condition earlier in the season than any other in the neighborhood. One lot drained in 1852 was in good working condition as soon as the frost was out. Before drainage, cattle could not cross it early in June without miring. It enabled the *later* as well as the *earlier* cultivation of the land. He had plowed as late as the 20th of November." Messrs. Maxwell Brothers, of Geneva, N. Y., in a statement of draining done on their farm in 1855, and which received the first premium of the State Ag. Society, say they underdrained one clayey lot, which previously "it was quite impracticable to plow or cultivate in a wet time, and consequently it was very difficult to get in a spring crop in season." After underdraining "they could cultivate immediately after rains with advantage," and, of course, get in their crops much more seasonably than before. Mr. Yeomans, another Central New-York farmer and nurseryman, states that on his drained lands "the ground becomes almost as dry in two or three days after the frost comes out in spring, or after a heavy rain, as it would do in as many weeks before draining," and the frost leaves drained land at least a week sooner than that which remains undrained.

These instances are surely enough to satisfy those who have lost time, labor and crops from late sowing and planting, caused solely by waiting for "the subsiding of the waters," that there is a remedy for this evil—a remedy not only effectual in removing this, but many other disadvantages under which they labor in cultivating retentive or springy soils.

We have above stated that in addition to the lengthening of the time of preparation for crops, it gave, by enabling earlier planting and sowing, increased time for vegetation. How important this is, facts in the experience of every farmer show. "Ten days, frequently," says the author of *Farm Drainage*, "may be the security of our corn crop against frost. In less than that time a whole field passes from the milky stage, when a slight frost would ruin it, to the glazed stage, when it is safe from cold," and this advanced maturity often decides the question of profit for the farmer, making from one-third to one-half difference in the value of his product of Indian corn. A few days more in the early growth of barley, oats or potatoes will enable them far better to withstand the summer drouth, and thus mature a larger and better product. These few days, and more, will be given by providing a ready exit for the surplus water from the soil. We may not only have full time for the proper preparation of the ground, but (in usual seasons) for the full maturing of our crops.

Foreign Editorial Correspondence.

The Highland Society's Show at Edenboro.

Extract from Letter XIII, giving an account of the annual Exhibition of the Highland and Agricultural Society of Scotland, at Edinboro:

A walk of not more than a mile carried us to the Grounds of the exhibition, to reach which we cross a meadow adorned with numerous milch kine and small children—the former out for exercise more than for the grazing, as they are well fed and stabled at night; the latter apparently in charge of various articles of apparel, from which the sun is evaporating the last drops of the laundress' suds. Numerous pedestrians are also strolling around, and if we go out on Thursday we shall find multitudes on foot or in carriage, seeking ingress to the Show, or departure from it Then we pass the entrance gates, and are among the implements, while stretched across the whole field in twenty-five or thirty rows running back from the gates all those of one kind,—the plows, the thrashers or the harrows, for example—being classed together, an arrangement of which manufacturers complain as dividing up and separating their collections, although it seems well to answer the public convenience. It may interest the reader to know that there were about 60 plows, of different kinds, exhibited, including those for general purposes, for trenching or deep work, for subsoiling, etc. That there were over 30 Grubbers or Cultivators, with wheels and without, with prongs or shares or teeth, illustrative of the clean farming of Great Britain; and that three dozen Pulverizers and Clod Crushers, and nearly thirty Harrows for heavy lands, or light, or for covering seeds, represented the care with which a fine tilth is here so sedulously maintained. That over 40 machines were offered to put in the farmer's crops—to broadcast or drill his grain; to sow his grass lands, and to drop his turnip seed, either alone or simultaneously with some fertilizer; together with others specially intended for corn and for beans. So we might go through the whole list, which covers almost everything, from a liquid manure pump to a reaping machine, from a hay-rake to a thrashing-mill, from sheep hurdles to draining tools.

Proceeding along the central passage way between, we are led past a fountain to the Committee Rooms of the Society, and thence through the Dairy shed on the left, containing no less than eighty samples of Butter, to number one on the cattle list. The first prize Short-Horn bull was sired by "2d Grand Duke," while his mother was sired by "Grand Duke;" the second prize was sired by "Captain Balco"—both names well known in our Short-Horn annals. Among the bulls of 1857 I liked the first prize animal, which was of the Duke of Richmond's breeding; in those of 1858-9 Messrs. Smith & Co., of Ardersier, were rated second for one of Booth extraction from the Prince Consort's herd. Among the cows, Mr. Douglass' "Venus de Medicis" swept the prize deservedly; she is a fine example of the breed, if not one of the most perfect ever bred, and was sired by "Harbinger." The same gentleman took 1st and 2d prizes in the heifers of 1857, with The Lady and The Maid of Athelstane, the former of which I heard rated as "the best animal on the ground," but this gentleman was not so successful in the heifer calves, which as a class I think would scarcely rank as extraordinarily good. As a whole, this part of the exhibition would compare favorably, perhaps, with that I hope to see next October in Albany, but it strikes me that we have some animals fully capable of creditable competition in any of the classes on the field this week.

It is general with us to consider the Polled Black Scotch cattle as all of one sort, but two breeds are recognised here—the *Galloway*, with coarser bone and longer hair, and the *Angus* or *Aberdeen*, which possesses many of the characteristics of the Short-Horn, weighing well at an early age, often very nice in quality, and made up symmetrically to the eye as well as profitably for the butcher. The two breeds appear like the same thing—with the difference that might arise by one's having been suffered to go for many generations without much shelter, and exposed to a far less favorable climate, while the other has been carefully bred and protected, nurtured on rich pasturage, and never suffered to lack for food or warmth. Some of the specimens of it on the ground—perhaps the first prize yearling heifer furnishes the best example—if transmuted t a roan and adorned with horns, would have been nearly all that the lover of the Short-Horn could wish. I had no idea that so much had been accomplished toward the perfection of the breed, and I was given to understand that there is certainly not more than a few months difference in the time the Angus and the Short-Horn are respectively ready for slaughter. Mr. Bowie of Arbroath, who has stood at the head of breeders in this class for some time back, told me of having killed a bull at 4 years and 4 months old, which weighed for the four quarters and the fat, 2,100 pounds; he only exhibited this year a single bull, a two year old, which came out second in his class, although the one to which the judges gave precedence has been criticised since the decision as unworthy of it, both privately and in one or more of the newspaper reports.

The Galloways are undoubtedly hardier than their more high bred brethren; we have had at some of our exhibitions quite fair specimens of the breed, brought over by Canadian gentlemen. They make good beef, but must be a little longer in the operation; they have been found to make a good cross for feeding purposes with the Short-Horn, giving the progeny the power of "roughing it" a little better, perhaps, in exchange for the earlier maturity and disposition to take on flesh which it gets from the other side.

Still more shaggy and curly haired than the Galloway, coming from a bleaker and ruggeder district, less in stature and long in horn, generally I think a kind of dark brown in color—come the West Highlanders—productive of good beef, which is their main object, but also often quite large milkers, I was told. It is said that this breed was falling out of notice, but the present show should have the effect of calling attention to its merits for such localities as cannot well support the more tender and dainty races.

Of the Ayrshire cattle, some of the bulls were really good animals—as for instance the first prize in the aged class, which had received similar honors at the Glasgow shows, and one or two others in the younger classes. The first prize cow was also the one which held the same place at Glasgow this year, and was considered at both shows. "a singularly fine first class specimen of the breed." The Ayrshires are so widely known with us, that it is quite superfluous to refer to their milk giving propensities, but from what I have been able to learn, I infer that they are coming more into request now than heretofore, and that more attention than ever is given to rendering them good for dairy purposes.

As to sheep, I may refer to a difference which has been already noted I think in my letters, between the Leicesters shown by different breeders, especially as regards size—a difference which brings the judicial decisions of the show grounds into conflict with the opinions of those whose preferences chance run in another channel. It extends to the character of the wool as well as to the make of the animal, and as it is unknown which the judges at any show may look upon as the type best to be retained, the breeder who wishes to be a prize taker, is at loss to determine whether to introduce more of the English southerly blood, or to stick to the border-bred sheep, which has perhaps a tinge of other blood at bottom, although unacknowledged. The Black-faced sheep, whose heads are singularly mottled of jet black mingled with white, are a quite important breed, and make excellent mutton; next to the Cheviots, they are the most commonly seen through the country.

There was much to attract attention in the long range of Clydesdale horse stalls—so much, indeed, that, not having examined them when the grounds were less densely filled on Wednesday, I found the crowd so great on Thursday that there was much difficulty in getting near their stalls. They appear to have somewhat more life than the Suffolks, and to be a little less inclined to take on fat. Whether our hot climate would disagree with these heavy animals, as seems to be rather the common impression, I am unable to tell, but I think the best draft horses in our cities are verging much towards the Clydesdale type, and the demand for it I should consider thus likely to increase rather than diminish.

On Tuesday there was a trial in thrashing, five machines being tested with wheat, and the work accomplished by the largest of them was "extraordinary," says an unofficial but highly accomplished reporter—"about 50 or 60 bushels of wheat an hour being finished for market—the separation of straw, chaff, &c,, being made in the neatest possible manner." To do this probably requires a six or eight horse power engine.

In the afternoon of the same day there was a trial on grass land, when Allen's mowing machine, made by Burgess & Key, cut well. Hay rakes were also tested, and a part of the field plowed for the purpose, afforded room for experiments with the harrows, pulverizers, grubbers, &c., entered for competition. In the evening Dr. Anderson, chemist to the Society, delivered a Lecture on the Feeding of Stock as a branch of Farm Management. I should like to have heard it, had I known that it was to be given, for I have since been told that it was eminently practical, sound and reasonable.

As one of the incidents of the week, which should not be lost to republican readers, the faithful chronicler could not overlook the duty of mentioning that the future sovereign (should Providence so order it) of that Great Empire which has so long embraced the world with its territories, ships and manufactures—twice "honored" the Show ground with a visit on horseback. The Prince of Wales is a slight "laddie," with a pleasant expression, and quiet, gentlemanly demeanor. I observed that in lifting his hat to respond to the salutations of those around him, that useful article of shelter was elevated very perpendicularly, and I did *not* observe that either the head thus uncovered, or the neck beneath it, condescended to the slightest possible forward or downward inclination. It was not ungracefully done, however, and I suppose it contrary to etiquette that the royal bow, although a matter of politeness as an *acknowldgment*, should become in the most remote degree the symbol of an obeisance. The young gentleman has been pursuing his studies at Holyrood Castle for some time back; he is said to resemble his mother very much, which I can easily believe, although I have not seen her, from the fact that his profile is almost the precise counterpart of the Queen's, as officially portrayed and impressed upon that most burdensome coin of the realm, the copper penny. He was received by the people with considerable enthusiasm, occasionally an instance of which was a little amusing—one motherly old lady who pressed forward to get a good view, whom I happened to be near, and whose voice was inversely in proportion, as regarded volume, to her matronly person,—ceased not to cry a shrill "Hooray," as long as he was in sight, no matter whether there was any other acclamations or not. I moreover overheard more than one of the numerous younger ladies on the ground stoutly declaring that she, individually and particularly, was herself the unmistakable and only person in the crowd to whom the royal hat was raised in passing that part of the ground. All this, however, is very pardonable, it a weakness it shows, and I hear everywhere expressions of affectionate loyalty and respect toward Her Majesty, whose success in uniting the hearts of her people in support of her throne and family, certainly goes either to prove herself a clever and sensible as well as a good woman, or else to show that what we may call the "bump" of reverence for lack of a better term, is very prominent in British heads.

The Banquet or dinner of the Society took place Wednesday evening. The Duke of Atholl presided, dressed in his Highland costume complete, with the star of the Thistle on his breast. There were also present the Dukes of Richmond and Buccleuch, and many others of high rank in life, or whose assistance the Society had received as Judges, or who came merely as lookers on and partakers,—so that altogether perhaps more than two hundred were present. I was quite interested in the proceedings and the speeches, and the whole seemed a very good method of promoting good feeling and mutual courtesy. It would not be of interest so far away to go through with the toasts that were drank, and the responses that were made. The Duke of Richmond, in answering on behalf of the "Successful Competitors," gave quite a sketch of his own ill-success for sometime, and of his perseverance until he had lately quite reversed the fortune of other days. He had previously responded for "The Army," when he alluded to the fact that 49 years ago he was a soldier with Wellington in the Peninsula. On both occasions he was received with much enthusiasm by the audience, but no more than was also shown for his grace, the presiding officer, or the Duke of Buccleuch, the last of whom appears especially to be quite a hard worker in the affairs of the Society.

The managers of the evening had done me the honor to call for an American response to the last toast but one upon the list—"the Strangers." The fact that the Highland and Agricultural Society is now just 75 years old, and the parent, I believe, of similar associations both in Great Britain and abroad, gave me the opportunity of offering the congratulations of our own Society upon the long and useful career her Scotch prototype has enjoyed, as well as of expressing the hope that the example thus placed before the agriculturists of other lands might be well and wisely imitated.

There is much more that I should like to say both in relation to this and the other exhibitions I have attended, now that they are all concluded. I shall endeavor, when opportunity offers, to give some notices of particular implements, and a little fuller description of some of the breeds of domestic animals.

Extracts from Letter XIV:

The Irrigated Meadows near Edinburgh.

After the Highland Society's Show of which I last wrote, I had the pleasure of visiting Robert Russell, Esq., whose tour four or five years since in the United States, resulted in a most interesting narrative embracing particularly our agricultural and climatic peculiarities, and who at home is both an industrious author and a careful thinker upon these subjects, as well as a close observer of nature. He was kind enough to point out to me some of the famous Edinboro meadows, which rent all the way from £10 or £15 per acre for those nearest the sea, up to double these prices for others preferable in condition and locality. I was always at a loss to understand how any grass crops could be worth a hundred dollars or more per acre for each year's yield, until I learned that the Edinboro milkmen still retain the singular impression so utterly obsolete with their New-York brethren, that the cow does require a portion of green sustenance in addition to the distillery slops or other food she receives, and that they pay enough attention to the healthy quality of her milk, and to rendering her own life a decent and comfortable one, to supply her with what her natural tastes and even her very existence for any length of time, seem so positively to necessitate.

The "rent," then, of the Edinboro meadows is the price at which the crop of grass for the ensuing season is bid off at auction at its commencement in the spring—the bidder cutting for himself from time to time as the grass is wanted for use, and feeding it green to the cows, which are either confined, or allowed during the day-time to range for exercise on some of the higher non-irrigated lands near the city. From a report published several years since, for a copy of which I am indebted to Mr. Russell, I find that up to the date of its issue, 1852, there were about 325 acres to the southeast of the place which had been brought under irrigation in parts from time to time, about 13 more on the north-east, and nearly 40 on the west. Of the first, which are known as the Craigentinny meadows, say 225 acres had then been in existence probably 60 years; this soil is "a hard clay," and its "laying out, levelling, gutters and sluices" are estimated to have cost £12* per acre, [English or Imperial,] but it is added that the operations were performed "piecemeal and in a very irregular manner." In 1826, thirty-eight acres, a mere series of sand hills and beach, without any soil at all," were added, costing £700 for laying out, the ground having been very rough, and the work consequently more expensive. This part was before wholly worthless, and all the soil it has at present is due to the action and the deposits of the sewage water. The remaining 62 acres are above the level of the "Foul Burn" or stream of sewage used for irrigating, and the cost of bringing this part into form, varied from about £5 to £24 per acre, averaging nearly £12; a steam engine already on the farm was taken to raise the water by means of pumps 15 feet, and then an additional expense had to be incurred of upwards of £1,000 in the construction of a passage 500 yards for the sewage water to reach the pumps. The interest on all this capital, allowing 7½ per cent. in order to cover depreciation, and the cost of wages and fuel for 224 days in the year, is estimated to amount, for these high level meadows, to about £4 6s. per acre, say $21, while the sea meadows cost rather less than $10, and the older and larger part only about $7, in both cases including working expenses and interest. It is calculated that the Foul Burn discharges about 220 cubic feet per minute; and the water, when running upon the land, is flowing both night and day, so that the period of irrigation during the year is equal to 224 days of 12 hours each, and the enormous quantity is distributed equal to 66 inches depth over the whole area on which the pumps are used, and probably about 5 feet over the remainder.

Over these lower meadows the water is carried in channels following the inequalities of the ground, or in some cases the land is laid off in "panes" of half a Scotch acre each, a "feeder" bringing the water to each "pane" or plot, and the latter plan, although at first more costly, is said to have been found preferable in practice. But I think that on a part of the irrigated meadows we saw, the distribution was effected by means of pipes and hydrants with hose attached—a method more economical of the water, where economy in this respect is important.

It was estimated that the eight months of grass-cutting will keep ten cows per Scotch acre, (equal to eight cows per English acre,) and this fact will enable the farmer or dairyman, with us, to determine the price he could afford to pay for the crop cut during the period in question. The cows are stated to receive, beside the grass, distilling refuse, costing from twenty-five to thirty cents each per week. The fertility produced is entirely extrinsic, it is remarked; that is, both the heavy clay and the farms sea-ward would be entirely or almost sterile without the application, while with it, the older the meadow the better it apparently becomes. Four, or sometimes five, times is the field mown, and it is, I believe, irrigated after each mowing, and several times during the winter season—14 days (and nights) being sufficient to go once over the 325 Craigentinney acres. It requires two hands to turn the water off and on, and this is the only expense on the low-levels to the owner of the land, except keeping the channels clear; the refuse taken out to effect the latter object, is valued as a manure, for enough to pay the expense of its removal. Occasionally turnips and potatoes are grown upon these lands, although Italian rye grass is the main crop. Mr. Bryce, the resident manager, at the time of the report referred to, thought the sewage refuse to exert a more permanent effect upon crops than guano. He had then a crop of turnips growing, which had received about 19 loads to the acre, together with 12 or 13 of farm-yard litter, and the land had had a dressing of the liquid before they were sown. This crop was "very fine," and was expected to realize £20 per acre; the land would be good for a fine crop of barley the next year, and was then to be put down in grass, both without further solid manure, which Mr. B. would not have attempted had guano been applied in lieu of the sewage.

The facts I have given will be enough, perhaps, to throw some light upon the subject of these highly-rented meadows, for those unacquainted with its details. I could have wished, however, had time and circumstances permitted, to have investigated the matter a little more carefully as it stands at present. The average rent of the Craigentinney meadows, was over £16 per English acre at the time of the report, and unless I am mistaken, has somewhat increased since; some of the best nearly doubling this figure. But the question of irrigation is one that will require a further letter, and I shall hope then to recur once more to the modes here practiced, and the results attained.

Fenton Barns and Halton.

My next visit was at Fenton Barns, the farm of Geo. Hope, Esq., in East Lothian, who is justly esteemed a prominently successful farmer, in a district where agriculture is in a very advanced state, and whose system of operations deserves a more detailed and careful account than time will now allow. But there is too much that is interesting in the locality to pass it by without a word. In promising hereafter as full a description as possible of Mr. H.'s ways of management, I need scarcely add that they are eminently of that kind which puts money into the pocket instead of taking it out, and this I suppose to be the real *gist* of all farm economy. This region is not one in which the four course or Norfolk rotation is strictly followed, although its theory furnishes the general outline of operation, so to speak. I had before seen examples of its unvaried employment; here I came to where it meets with numerous modifications, and I have since visited dairy districts in which it is scarcely recognized at all.

A pleasant walk inland from Largo station, it is to Halton,* the residence of Mr. Russell, senior, at whose farm I found that modern innovation, the reaping machine, in preparation for action—a new specimen of Burgess & Key's McCormick being just on the launch for its trial trip in the ripe "corn." * * * The farm at Halton is about 370 acres in extent, and I understood that it was customary to keep three or four hundred sheep through the winter, and from two to three hundred in summer, while about fifty cattle are also fed. The general rotation upon the heavier lands, is one of six years—for example, 1, wheat; 2, clover; 3, oats; 4, beans; 5, wheat again, and 6, either a fallow or a turnip crop, before beginning the same round a second time. On the lighter lands this course might be extended to seven years by keeping the clover or grass for two successive crops.

Flax Dressing Mill.

We had a fine drive in the afternoon. One hears from open doors and windows, in the villages through which it carried us, the sound of the weaver's shuttle, for in this and some other parts of Scotland, the hand-loom is not altogether a thing of the past. We visited an establishment for the preparation of the flax in the straw, so that it can be converted into yarn and linen by the village, or other and larger manufacturers. In the former case, the fabric produced is bought up by houses extensively engaged in the trade, and sold in quantities for export or home consumption. I was told that the expense of manufacturing is not very widely different, as between the power loom and the hand—the former, however, having the great advantage of being able to work up much larger quantities in a given time, and admitting of better command over markets, so that it is by degrees superseding the ways of the fathers. At the mill we visited, which is carried on by a son of my host, they were making an extension of buildings and machinery, so that only a part of the works were going forward. They buy the flax, as I have intimated, in the straw, from those who raise it, and it is necessary to steep enough during the season favorable for this operation, to last for the winter's work, when the weather is too wet to dry the rotted stems. There are twelve or fifteen pits of different widths, 6 feet deep and 22 feet long, in which the steeping process is carried on. After it is completed, to accomplish which considerable experience and good judgment are requisite, in regard to the time occupied—the stems are passed between very heavy iron rollers, with jets of water playing on them, after which washing and squeezing, they are spread upon the ground, to be subjected to the evaporation of the open atmosphere for a period averaging, perhaps, 12 or 15 days, but varying much in different cases. The straw is then in a state to be stacked for use as required. A breaking machine, consisting of fluted rollers running together like the teeth in cog wheels, next loosens and separates the fibre, and detaches a part of the extraneous material still remaining. The hatchelling succeeds, handfulls of the flax, as it comes from the breaker, being held against a smooth wooden upright, and the long arms or beaters projecting from a revolving shaft, strike it one after another, clearing away the tow and further reducing the fibre. The price paid for the straw runs from £2 per ton upwards, and is sometimes as high as £5 for the best, although £4 is more usual

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*A pound sterling (£) may be computed at $5, which is near enough to convey an idea of the sums expressed in this paragragh.

*It was in a defile which the road here skirts that I saw that sight common enough in many parts of our own country, but sufficiently rare here to be perhaps worthy of remark—*a saw mill* at work with water power. Both the timber to saw and the descent to give power are very "scarce articles," generally through Great Britain.

Mr. Lawson's Steading and Farm.

The stop I made first was at King's Kettle station, and a few moments' walk carried me to the finely situated residence of Mr. Lawson, who is scarcely a fair example of economical practice I am afraid, for I learn that he conducts his 240 acre farm rather with a view to recreation than for any purpose of pecuniary profit. Among the complete and substantial, the convenient and labor-saving steadings I have seen, none can I call superior to the buildings upon this estate. The particulars in their construction, of arrangement and dimension, my visit was too hurried to allow of obtaining, but they will be worth the publication most amply if I am favored with them hereafter.

Like most other farmsteads of the present day in Scotland, the one under consideration is built of solid masonry, and everything, I believe, within and without, is of stone. The divisions between the stalls are large thick slabs, and each has its water trough with supply from a faucet of its own, while the arrangements for feeding are so calculated as to save labor wherever possible. Beyond the engine of six-horse power, and the thrashing apparatus are close at hand, and the liquids from the stalls are of course duly carried away into a proper receptacle, which is no less than 70 feet long, 12 wide and ten or eleven in depth, all of stone, with a gage rod and index showing the quantity the tank contains. A pump worked by the engine is affixed, and the lowering of the water surface within of course indicates the quantity drawn out for the irrigation of several adjoining fields. Five pair of horses are employed to work the farm, and the buildings accommodate 60 head of cattle. Mr. L. uses the following succession of crops as a general rule: 1, grass; 2, oats; 3, turnips; 4, wheat; 5, barley, and 6, grass again on the lighter lands, when it is mowed one year and pastured the next, but on the heavier soils the course is only a 5 year one. The rent in this part of the country is about fifty shillings per acre, (say $12.) Last year, as in other localities, the grain crops were very fine, some of the wheat and barley here yielding 56 bushels per acre. Mr. L. had travelled in the United States, and in speaking of the heavy Clydesdale horses, of which all this part of Scotland affords many good examples, he expressed the opinion that they were not so well fitted for the greater heat of our climate as some of our lighter breeds, although a cross might not unlikely have a beneficial effect. He commented upon our neglect of manures, and I told him that I hoped every day was bringing some improvement in this respect. In his rotation the green crops all receive some application, and indeed the barley also, for the grass is sown with it.

More of Fifeshire Farming---"Park Hill."

The farm that bears this name embraces five or six hundred acres of land running nearly two miles along the water's edge, and back from it a little way upon the adjacent hill-sides. A seven year rotation is common here, consisting of, 1, wheat; 2, barley, the ground receiving a dressing of farm-yard manure; 3, grass, the seeds having been sown among the barley; 4, oats; 5, potatoes or beans, for which crops manure is again applied; 6 wheat, often manured, and, lastly turnips, which of course are treated with fertilizers. Some of the heavy lands, which are a stiff clay, have been quite effectually drained, I was told, by digging first a simple ditch to a depth of eighteen inches; then with a spade perhaps two inches wide at its lowest end and not much more at top, a spit is taken out from the bottom of the ditch cleanly and carefully, as this is to form the channel for the water. The original ditch being broader than this channel, shoulders of earth are left on both sides of it, and they receive and support a covering of flat stones, on which, after a layer of straw or similar material to aid in keeping out the wash, the earth is again filled in. Here, as elsewhere in Scotland, the grain is sown more commonly broadcast than is the case in England, and experience has shown, it is stated, that the "benefits of drilling are more marked in poor soils than in rich, on light than heavy land, in dry climates than in moist." Where the surface is less hilly, moreover, machines can of course work to better advantage.

Both in Europe and Great Britain, the women and children do a far larger share of the agricultural work than one is quite prepared to expect, although he may often have heard the fact alluded to. Many operations are performed *by the job*, one man taking it at such a rate of payment, and occupying his own family if he has one, or engaging otherwise a sufficient force of females, or of boys and girls, as the case may require, to enable him to complete it most economically. For example, here the reaping is done for twelve shillings sterling per acre, (say $3) paid to the man who binds the sheaves, and who has five women under his superintendence who do the cutting with sickles or *hooks* as they are more generally termed. Ordinary labor costs about twelve shillings a week, and perhaps £18 or £20 per year for hired men receiving their subsistence wholly or partly.

Fifeshire contained in 1856, nearly two thousand "occupant" farmers, whose arable land averaged to each 114 acres, showing a larger extent of land individually farmed, than is the case in the rest of Scotland—the average for the whole country being a fraction less than 83 acres to a holding, of land under rotation. In Fife, too, a larger proportion is in white crops, being 46 per cent, or nearly one half, which is seven or eight per ct. more than the proportion the country through. Of this 46 per cent, about a third is wheat, a fifth barley, and two-fifths oats—which latter is a favorite grain as the world is well aware, wherever the Scotchman breakfasts on "porridge" or sups on "cakes." Of the other 54 per cent of arable land, there was more than half in grass, about one-fourth in turnips, one-seventh in potatoes, while mangolds, beans and peas, cabbages, &c., are all cultivated in quite a small way, and on less than one acre in a hundred was the old practice of summer fallowing still adhered to. The average production, according to the statictics of 1856, was about 27 bushels wheat, 33 barley, 37 oats, 30 of beans or peas, 13 tons turnips, and nearly 2½ tons potatoes. But the crops are stated to have "suffered from exposure" that year in some parts of the country quite seriously. To work the land, about four horses to a hundred acres are employed.

Extracts from Letter XV :

System of Commutation.

It is the British theory of ownership in land, that all proprietors hold of the Crown, and that as tenants they should pay a formal rent as a mark of fealty or homage In some cases exemption has been acquired by a single exploit or payment, or otherwise obtained, but the old law is still, in many cases, enforced, subjecting an estate to a certain contribution in kind, or the owner of it to certain personal service. The author of "Waverly" good humoredly satirizes, in that novel, the latter mode of expressing one's sense of loyal dependence. To the former—the payment of a small tax in kind, or rather to the Scottish way, by which an equivalent of that tax is determined in money, we owe very interesting statistics as to the prices of grain, for a period embracing, I think, about two hundred years. Perhaps a third of the farmers in a parish, are summoned by the authorities during the last week in February or the first three weeks in March, to send in a sworn schedule of the wheat, barley and oats they have sold since the last harvest, with the prices received for the same. The average of all the prices is taken, and constitutes the standard by which payments to the government are that year commuted from grain into money.

Use of the Word "Corn."

And speaking of grain, reminds me that if I had a Dictionary in my travelling library, as unfortunately I have not, I would endeavor to ascertain the origin and etymology of the word *corn ;* for I have remarked this peculiarity in its use, that although signifying and employed here in a general way to express grain of any kind, still it seems to appropriate itself, in each locality, peculiarly to that kind of grain which is there most common or most important. For example, with us "corn" signifies *maize*, and has come to have this signification exclusively ; but in England if a farmer says that his next crop in such a field is to be "corn," you may take it for granted that he means *wheat*, while if a Scotchman chances to make the same remark, you will understand, as a matter of course, that he refers to *oats*. In some parts of England, too, the word "beast," which we apply to one kind of domestic animal, almost as much as to any other, is limited to the bovine race, and our term "cattle," is extended in its signification to cover both horses and neat-stock, as well as sheep and swine.

Excursion to the Highlands.

Such comparisons as to the use of language or any other subject of thought, may occupy the mind while we are carried over the rails from Stirling to Callender, for we shall only have an unsatisfactory glimpse, in passing, of the Bridge of Allan, the Cathedral of Dumblane, "the banner'd towers of Doune," the waters of Ardoch and Teith, Lanrick Castle and Cambusmore. But at Callender we relapse a while into the times thirty years or more gone-by, for we take a coach-top seat for two hours of fine air and noble scenery.

But of this drive and journey after it, I am not going to attempt a description. It is the country of the "Lady of the Lake!" Coilantogle Ford is still where it was when Roderick Dhu acted as the guide across it of the "stranger" whose friend he had been when in need of hospitality, and whose foe he was as soon as the duties of hospitality were fulfilled. Ben Ledi and Loch Venachar, Ben Venue and Loch Achray, Lanrick Mead, where the ranks of Clan Alpine mustered, Duncraggan and the "Brigg of Turk"—these names and scenes, and others like them, fill one with such sensations as he might experience if he should actually awake in some region of myth or fable. It is entering the cave of Aladdin, and handling its precious stones with one's own fingers, and smelling the fragrance of its perennial blooms with the real and natural nose that smells the odor of ordinary flowers.

And so we come to the Trosachs, a bristling and rugged pass,

> "So wondrous wild the whole might seem
> The scenery of a fairy dream."

And at its entrance Beal an Duine, where died the "gallant grey," Fitz James was riding – a misfortune that led him where we are going—to Loch Katrine and Ellen's Isle. Ben An and Ben Lomond tower above us here, and we long for a day or two to spend in exploring localities so enchanting, in rowing over a surface so transparent and so smooth, in waking the echoes that once rang with the slogan, and thrilled with the pibroch of Clan Alpine's chieftains. Time is inexorable, however, and our little steamer hurries us on ; and the blue smoke curls away from her chimney, and carries our thoughts with it, eddying along lake and mountain steeps to the haunts of the old masters of the hills, who fancied that, like their native home, they too were

> "Moor'd in the rifted rock,
> Proof to the tempest's shock."

Hunger gives a practical side to every subject, too and in these Highland realms exercise is invigorating to the powers of both mind and digestion. It is at an inn bearing that resonant combination of consonants to which it is so difficult to give the true sound for any but a voice versed in Gaelic mysteries—the Stronachlacher Hotel, that the traveller has an opportunity of carrying out two designs which will for some time have been maturing in his bosom—to obtain a luncheon and to gather a handful of heather blooms. Not only the common heather will he find, but also two or three kinds of heath, and if he is a true Scotchman at heart or in birth, he will be wearing a cap or "bonnet" into which can be fastened a becoming plume of their sprigs and spikelets and purple bells.

It is a five miles drive to Inversnaid on Loch Lomond, and then not quite two hours by steamboat carry us through a series of views probably unsurpassed of their kind, reminding one a little, where the islands are most numerous, of some parts of the St. Lawrence, but generally with bolder and higher banks. Toward the southern extremity the hills slope more gently away ; the scenery becomes softer and the verdure more abundant, and many a sheep farm there nurtures a flock profitable in fleece and flesh. The sheep-walks are commonly rented not by acreage but according to the number they will graze, and here on these pastures the shepherd's occupation is not yet gone ; with the intelligent assistance of his dog, his watchful care is still daily and nightly exerted over his charge, quite in the old pastoral way.

In association as well as from their natural beauty, the Scotch lakes seemed to me almost like a region of enchantment. They appear to have a character of their own, distinct from that of any other scenery ; they retain in a great degree the primitive wildness of other generations : the mead that carpeted the gatherings of the clans, now yields, it is true, a crop of scanty grass, but no one has yet desecrated it with a modern dwelling ; the cliffs and haunts of Roderick Dhu and Rob Roy have not been dug away for railroads, or absorbed into tillage ; the pedestrian may now trace the sequestered pathways trodden by the messengers of border war, the bearers of the "Fiery Cross"—the boatman dip his oar where the Lady of the Lake rowed and sang, and where the pure waters and the picturesque heights around once echoed to the triumphal shouts and bagpipe of the McGregor. The hotels for the accommodation of the tourist in the Trosachs are castle-like structures of solid stone, and the steamers are so quiet and undemonstrative that one forgets their incongruity in their convenience, especially if he be a hasty American. On the coach and steamer I had the pleasure of meeting a very intelligent gentleman, perfectly conversant both with the language and the romance of the locality, and from him I learnt many particulars not mentioned in the guide books.

The most remarkable object seen in passing by Railway from Balloch, at the foot of Loch Lomond, to Glasgow, is the singular rock at the junction of the river Leven with the Clyde, on which is posted, five hundred feet above the sea, the castle of Dumbarton. This rock is only about a mile in circumference, and one can with difficulty account for its abrupt precipitous rise in the midst of the flat valley at its base, entirely isolated, and at a considerable distance from any hills.

Kent Cattle Show.

The reader will by this time have become so accustomed to abrupt transitions in these letters, which at present outline a journey whose details are to follow subsequently—that I shall not apologize for omitting now the record of some time pleasantly and profitably spent upon the estate of the Laird of Airdrie House, who prefers a Kentucky home to a noble mansion here replete with every luxury of aristocratic life; of a most interesting visit to the famous Iron works of that mining locality, as well as to one or two of its farms, and the Grand Palace of the Duke of Hamilton, beyond the Bridge of Bothwell; of a tour in Ayrshire, another at the English lakes, a day with the noted Dairy farmer Mr. Horsfall, together with something of the Western counties of England, of Staffordshire, and finally of Kent, and this last brings me to the point I am desiring to reach, the Show of the farmers of that region at Ashford, on Wednesday last, which it will only be of interest to notice while the event is still fresh in the recollection.

A score of horses were competing, mostly, I should judge, of Suffolk extraction, and including a few fair specimens of the English idea as regards the "Agricultural" breed. The first prize went to a sleek, bright bay, called "Young England's Glory," standing sixteen and a half hands on his shoes, with legs not too long, and such muscular development above them as they like here to have their workers carry. For a horse with such a weight has only to use the leverage of his limbs by leaning a bit away from his load, when bone and muscle and flesh seem to aid one another, as it were mechanically, in effecting "a long pull, a strong pull, and a pull altogether."

There were two kinds of cattle shown, Short Horns and the Sussex breeds, (not to mention two or three samples of the Alderney.) The Short Horns were out in remarkably good force, I understood, for this locality; nearly fifty head were exhibited, young and old, and among them were such bulls as that of Mr. Noakes, bred by Prince Albert, and such females as Lady Pigott's "Lady Sarah" and "Duchess of Gloucester." I have yet, in fact, to hear of a county show in Great Britain, where there will not be seen some touch of the Short Horn blood, and it is illustrative of its popularity to find it classed first and alone on the catalogues I have seen, while "all other breeds" are often lumped together in a second class, constituted generally of the breed indigenous to the district, mostly or entirely. It is the only kind of animal, as far as I know, which has this common reception in the show-yards of the three kingdoms, and in the farm-yards of so diverse localities.

As to the Sussex, they struck me as bearing a relationship to the Devons, which for the sake of illustration I may compare to the relative characteristics of the two Scotch breeds I noticed in a former letter—the Galloways and the Aberdeens. The first-named in each couple are not nearly so fine, symmetrical and highly bred, while at the same time there are marked similarities of color and general appearance. The Sussex are thought hardier than the Devon, and when I say that looking at the head and neck of one of the cows, I took her certainly for a bull, it will be understood that they are quite lacking in that beauty and delicacy for which the Devon is so remarkable. But they are as invariably red; they are said to make equally good working oxen, to be fair milkers and to be convertible in the end into by no means a despicable quality of beef. They were repsesented on the grounds to the number of about seventy head, and as compared with previous shows, I was informed that in merits as well as numbers, the exhibition was regarded "good"—the males, either better in breeding than the females, or else whatever coarseness there is in the breed, comes out most strongly in the old cows.

Among the Long-Wooled Sheep, the "Pure-bred Kents" are first of course; they were out to the number of nearly 40 pens, and there were also a few Cotswolds. Seventeen pens of Downs, not altogether very remarkable, completed the sheep list; there were also some fleeces exhibited in competition, the Longwools varying in weight from as low 7 lbs. 4 oz., to one of 10 lbs. 12 oz., which took the first prize, and one a little heavier, (11 lbs. 2 oz.) which took the 2d—and the Down fleeces running from 5 lbs. 14 oz., to one of 9 lbs. 3 oz. There were but few Pigs in the yard. The show of Poultry was quite extensive.

There was quite a turn-out of Implements, mostly from the manufacturers of the vicinage. Fowler's Steam Plow was at work, and seemed to attract more attention than usual, for this field had about as many visitors as the general exhibition,—and, the same charge being made for admission to it, the result was quite favorable in a financial point of view. The plowing was excellently done as all admitted, the furrow 8 or 10 inches deep and otherwise very satisfactory. Burgess & Key's McCormick's Reaper and their Allen's Mower, were also tried to the great interest of many spectators, and doubtless as satisfactorily as could be expected, but the farmers here are very critical in their harvesting operations, and take reapers as well as steam-plows a little slowly.

And now I should come to the dinner, which ended the day, and which, under the able chairmanship of Lord Sondes—who has estates here as well as the one I have already mentioned in Norfolk—"went off," on the whole, perhaps more spiritedly than any at which I had before been present. The speakers were good, and might be pardoned here, so near their European neighbors, for saying a little more of "invasion" and "rumors of war" than their inland brethren—a subject on which a gentleman who adventured some peace sentiments, found a very unanimous sentiment prevailing, to the effect that it is only "a strong man *armed*, who keeps his palace and his goods in safety."

Altogether there were about twenty-five toasts or responses, and at the end the audience did not seem wearied—a fact which speaks more for the life and spirit by which they were generally pervaded than any other. The company numbered over 350, if I was rightly informed, and the places were all taken some while in advance. A late comer myself, and missing my friends until the repast was half concluded, I was quite startled when his Lordship who presided, suddenly proposed an American health—going entirely beyond the previously arranged and printed programme of the occasion to do so—for which very kind attention very gracefully offered, it is no more than proper that this acknowledgment should be made,—bearing additional witness, as it does, to the cordiality and courtesy now so uniformly manifested toward us, on this side the Atlantic, and quite reciprocated I trust by ourselves on the other. It is an incident to which I should not think it otherwise allowable for me to allude, but it seems to me indeed that they have much mistaken their province who write of other peoples and lands, and who in doing so take every opportunity for criticism and fault-finding, and little or none to contribute their mite in the promotion of mutual charity and respect. Faultless in manner, in grammar, in habits of mind and heart and life, are we none; it is wonderful how much mankind will be found alike in all the wide realms of civilization; how the same petty grievances might be made the subject of similar complaint throughout, and how, too, all these dwindle into insignificance, by the side of what is good and generous and true in the common impulses of the heart.

This however, is a matter foreign to my purpose now, for I hope at some time to illustrate it more at length. Let me conclude by saying that the next day or two after the show, were passed under the kind superintendence of Frederick Neame, Esq., in seeing something of the hop-gardens and general agriculture of Kent. L. H. T. *London, August* 27.

Inquiries and Answers.

Cultivating Drained Swamp.—I have a piece of land upon which there is a muck swamp of about twenty acres, which I propose to drain, and plant with corn next spring. The muck is from two to eight feet deep, and of a superior quality. How shall I prepare this soil for the seed? Had I better plow it this fall? What is the best crop to put on in order to get the most profit? And how must the soil be treated to ensure the desired result? E. J. H. *Peekskill* [The great point is to secure perfect drainage—then to clear off all rubbish that may impede the plow. It will be best to plow it in autumn, and have it exposed to the action of freezing. The application of some ashes or lime, and perhaps a small portion of stable manure, will probably be useful. Corn, timothy grass, and broom corn, all do well on reclaimed swamp land. We would however recommend planting some early varieties of corn, the King Philip for instance, as swamps are liable to later spring frost, and earlier ones in autumn than upland, and the corn will be apt to run largely to stalk, if of a tall-growing sort.]

Timothy and Herd's Grass.—Two persons were discussing the origin of the name of Timothy or Herd's grass—one said it originated from one Timothy Hurd, who introduced it into Pa. Query—What is Timothy and what Herd grass? The same or different grass? What is it called in England—what in this country? As you seem to be the arbiter of all disputes, the matter is referred to your decision. A short paragraph in your next will answer the question to the satisfaction of the disputants. X. [The Timothy grass is the *Phleum pratense* of botanists, and derives its name from Timothy Hanson of Maryland, (Loudon says Timothy Hudson,) who introduced it. It is often called *Herd's grass* in New-England, from a person of the name of Herd who disseminated it. South of New-York, the *Red Top* (or *Agrostis vulgaris* of botanists,) is called Herd's grass, from what origin we do not know. The Phleum is generally known in England as Cat's-tail or Meadow Cat-tail, and often by the name of Timothy; but we do not know of any called Herd's grass there.]

Seeding for Pasture.—I wish to seed down a pasture with a mixture of Orchard grass, Red-top or Herd's grass, and Kentucky Blue grass, to be seeded with wheat this fall. Now the doubt I feel, is as to whether it will be safe to seed Orchard grass in the fall—whether it is hardy enough to stand the winter in its young state. F. C. N. *Leonardtown, Md.* [Our own experience with autumn seeding applies only to the north,—where it is very successful if done early or soon after the close of the summer months. If sown much later, an unfavorable winter may throw out or destroy the young plants. Orchard grass sown in time to get a good foothold, will endure the winter. Autumn seeding with wheat we have found frequently to injure the growth of the grain; as wheat, like other plants, must be retarded when surrounded by a dense growth of young grass. The effect would be rather better if the grass seed were sown early in spring, and a brush or very light harrow run over the ground. But when practicable, the best way would be perhaps to harrow the stubble immediately after the removal of the grain, to start the weeds, and in a few weeks plow the surface with a gang-plow, sow the seed, and brush it in by the first of autumn.]

Leaf-Mould.—Is leaf-mould, as it is designated in books, entirely composed of rotten leaves, or is rotten wood also termed leaf-mould? C. F. [Leaf-mould is essentially decayed leaves, but it often contains portions of the rotten branches; but the less of these the better, as leaves form a finer material, more free from coarse or fibrous portions.]

Seeding.—We have four acres of ground, on which we have raised potatoes for the last two years, which we wish to seed down for grass. Will you inform us what species of grass seed would be likely to do best on it, and where such seed may be procured? The soil is a sandy loam—has been well manured heretofore. Please inform us also, how much seed would be enough for the four acres. W. F. Rogers *Northampton, Mass.* [The most popular seeding in the Northern States is a mixture of timothy and clover. The clover yields the chief product at first, and the timothy then takes its place. Timothy alone will give heavy and immediate crops of hay. A common quantity is a peck of the mixture per acre, but this is only half enough. A bushel per acre has been found to double the crop yielded by sowing but a peck. The seed may be had at all agricultural stores, and often of the common country merchants.]

Hardy Climber.—Can you recommend me any quick growing vine for a rock fence? An evergreen preferred. Hunter Nicholson. *Columbia, Tenn.* [The old single Michigan rose is a strong hardy grower, and would doubtless answer a good purpose—also the Bignonia radicans or trumpet creeper. The ivy, which is not hardy enough for the Northern States but does well in Southern Pennsylvania, is a fine evergreen climber, and would probably succeed well.]

Time for Digging Potatoes.—Will you or some of your readers please inform me which is the best time to dig potatoes—as soon as the tops begin to die, or wait until they are perfectly dead? I have quite a number, and not knowing which is the best time to dig to keep from rotting, will some one inform me that has had experience in the matter. G. K. *Stotes Hill, N. Y.* [After the tops stop growing, and the leaves wither, the roots grow but little more. It is more convenient to remove the tops when they are entirely dead; but in waiting for this, we often lose more than we gain, the autumn rains having set in, rendering it difficult to house the potatoes in a clear dry condition. Nothing contributes more to promote the rot than storing the roots when muddy; and it is therefore best to take time by the forelock, and get them in during good weather, even if the stalks are partly green.]

Subsoiling and Plaster.—I want to put two fields (rolling ground) in *posture*, and will be glad to have you inform me whether it would be best to have the ground subsoiled. The land is limestone, with yellow clay subsoil. Would it be an improvement to put plaster on clover, after the ground has been limed, and if so, in what quantity? A S. J. *Penn.* [Subsoiling, except with gravel or light sandy earth, is always useful. If the subsoil is sterile, as subsoiling deepens the porous parts, it forms a reservoir or sponge for the absorption of surplus water in wet seasons, thus preventing excessive moisture; and gives it out again to the growing plants in time of drought. If the subsoil is fertile, the advantages are increased. Plaster in some localities greatly increases the clover crop—in others it proves of no value. The experiment must be tried a few times to prove its value. One or two bushels per acre is enough.]

Golden Rod.—We have got a lot of about 12 acres on our farm which is completely overrun with weeds of the enclosed sample. It grows from one to two feet high, and branches out at the top, and the roots spread so much that it is impossible to go more than five or six yards before the plow gets quite choked up. We should like to know the name of this weed, and the best method you can give to root it out. Some call it the *Mountain Flax*. As for us we call it "*The Weed*." We only know of two other farms on which it is beginning to make its appearance, and we are sure the sooner it is plucked out the better. John Ainslie & Brothers. *Hartwick, Otsego Co., N. Y.* [The plant sent is a species of the *Solidago* or Golden rod—of which there are upwards of fifty different species. Dr Torrey describes twenty-two in the Natural History of the State. Many of these species run into varieties, and it is hence a matter of much difficulty to determine every one to a certainty. As the specimen sent is only a small portion of the plant, we cannot give the specific name. The root appears to be creeping, and, without branching much, to be densely covered with rootlets or fibres. If the dry stem could be burned late in autumn, and the roots turned deeply under by a large sharp plow, they would probably be mostly destroyed. If this cannot be done, the next best would be, after burning the tops, to plow the ground, and rake out the roots with a harrow. Perhaps some of our correspondents may know of a better way.]

Smutty Wheat.—Please inform me through The Cultivator, whether smutty wheat will raise smutty wheat? I have some that I find it impossible to get the smut all out. Will you, or some of your readers, be kind enough to inform me whether it will grow or not, and what will prevent it? G. A. K. *Hector, N. Y* [Smutty seed produces a smutty crop. The seed of the smut fungus, when examined by the most powerful microscopes, are found to be much smaller than the vessels or sap pores of the plant, and are doubtless carried through them. The experiment has been made by sowing good grains taken from a smutty crop, and which were no doubt well dusted with the fungus seeds. A portion was planted without any preparation, and the crop had many smutty heads in it. Another equal portion of seed was repeatedly washed in water, and the number of smutty heads was many times less. A third portion was washed in brine, with a still more favorable result. The best way is to wash first in water, then in brine, and then roll the seed in slacked or powdered lime. This process, if care is taken to prevent the seed from becoming tainted from foul bags or other sources, will nearly extirpate it.]

Rebecca Grape, &c.—Will you please answer the following questions through the Cultivator: 1. Has the Rebecca grape proved to be any hardier than the Isabella? Is the vine of vigorous growth? 2. Will peaches succeed well if budded on Canada plum stocks? Are they as good for this purpose as the common plum? 3. Is there any difference between the leaves of the Angers quince and those of the Orange? 4. Are the Angers and Portugal quinces identical or different varieties? Old Subscriber. *Worcester, Mass.* [In Western New-York, several cases have been reported where the Rebecca, standing side by side with the Isabella, has proved much the hardier, and this we think is the general opinion. It is not so rapid a grower. Peaches will succeed well on the Canada plum—better we think than on the common plum. We could not easily describe the difference between Angers and Orange quince in the leaves—except that the former is of freer and later growth. The Angers and Portugal quinces are distinct.]

Manuring Meadows, &c.—I wish to sow ten acres of rye this fall; will Peruvian Guano cause grass seed to take well? My object is to put what yard manure I have as a top-dressing on my meadows. I keep but little stock, and sell hay, and wish to keep my farm improving. Am I correct in my object, that is, to use guano to produce crops, and apply all the manure to the meadows top-dressing. Chas. B. Vail. *Oswego Village, N. Y.* [Guano has generally proved valuable for grain crops, but many excellent farmers doubt its economy. Land kept constantly in meadow needs frequent top-dressing in autumn to sustain it. We should prefer stocking with more animals, manufacturing manure, raising more food for the animals, in order that they may make more manure; and to adopt a rotation, allowing the grass in meadow to form a prominent part of the series, and continuing several years. We think more hay might ultimately be sold from a farm thus managed than if exclusively in meadow, to say nothing of its other products.]

Apple Seed.—Will you be so kind as to answer three questions concerning apple seed in your next issue? First, What is the best way to procure apple seed? Second, How should the ground be prepared to plant it? And third, At what season of the year ought it to be planted? Joseph McKee. *Dawson Co, Geo.* [Our correspondent will find an excellent mode for washing the seed from the pomace (which may be obtained at any cider mill) described on p. 204 of the Illustrated Register for 1859. To prepare the ground, make it fine, mellow and rich—such as would be suitable for garden vegetables. The seed may be planted late in autumn, or very early in spring. If in autumn, care should be taken that mice do not get them, planting them in a clean field, away from any rubbish that harbors mice—and if the animals are abundant or troublesome, it would be best to omit the work till spring. If the soil is rather heavy, it will be apt to form a crust by spring, through which the young plants may not easily find their way, unless the surface of the earth, after they are planted, is sprinkled with half an inch to an inch of fine, old manure.]

Corn Meal for Horses.—How does new corn meal do for horses? W. F. R. [It should be fed cautiously to them at first, to prevent souring—gradually increased, they do pretty well on it]

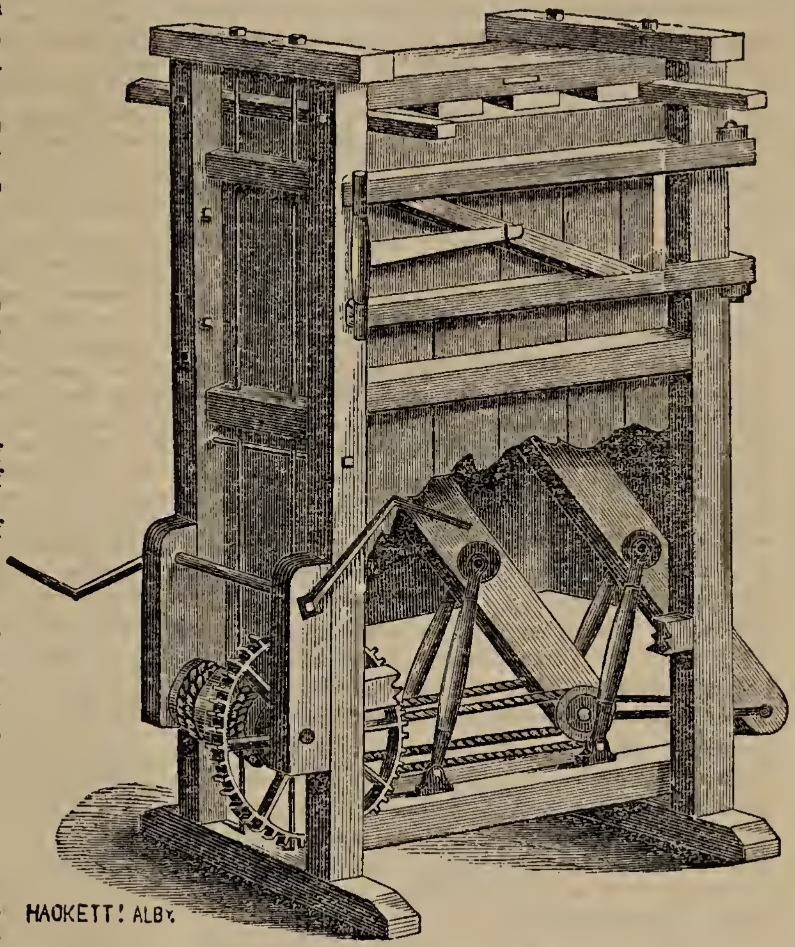
Cows Eating Pickles.—Can you or any of your friends inform me whether salt pickles are injurious to cattle or not? This summer I fed three cows about two and a half pails, and the same evening two of them were taken sick, and the next night one of them died, the other living till the next morning. About two or three years ago, I fed the same cows and another one more than I did these, and it never hurt them. When they were opened their bowels were all dried up, each layer having a blue coating on it. I was informed at the time that they had been fed salt petre by some unknown person, and that it was that which killed them. Will you please inform A Subscriber. *Troy.*

Blackberries from Seed.—Please say in one of your Nos., if the Dorchester and Lawton blackberry can be grown from seed, and which is the best. There is so much difficulty in getting roots and trees here, that our only chance is by seed per mail. T. B. F. *Flintsham Tan Yard, Texas.* [The seeds will grow if carefully planted and attended to, but there will be no certainty that the product will be of any value.]

Liquid Manure.—With regard to the information that Mr. John Johnston wants about liquid manure tanks, I would refer him to Mr. F M. Fraser of Utica, who has done so much in this and adjoining counties, towards the saving of liquid manure. There were over thirty thousand barrels of liquid manure applied to the meadows of this county this last spring, and all through his untiring perseverance for three years in introducing it. Any farmer that would visit the stables and yards on the different farms of the Messrs. Huntington of this place, would be satisfied of his practical knowledge in the construction of tanks. Those were superintended by Mr. Fraser himself, and they are a credit to him. Three years ago the New-York State Agricultural Society awarded him a handsome silver medal for his model stable floor, to save liquid manure, and it was well deserved. Mr. Fraser is a Scotchman, and only a few years in this country. An Old Farmer. *Rome, N. Y.*

Feeding Sheep.—May a young farmer, who intends to feed sheep this winter for market, inquire on what kind of feed he can fat them fastest—how it shall be prepared, and in what quantity given per head per day? W. S. *Goshen, N. Y.* [Will some of our feeders reply to the above?]

Dederick's Parallel Lever Hand Power Press.


HACKETT ! ALBY.

The annexed engraving represents an improved hand press for packing hay, cotton, hemp, flax, &c. It is the invention of Levi Dederick, of this city, and is an improved modification of his parallel lever hay-press, so favorably known to the public, and is now, for the first time, arranged so as to be easily and successfully operated by hand power. As will be seen by the engraving, parallel toggle-jointed levers are employed for the purpose of exerting the direct force required to pack the bale, and these are so arranged as to secure at once a harmony of action between the parts, a great reduction of friction, and a perfect development of the progressive power of the levers. The levers are operated by means of two ropes, the one ends of each of which are fasted to the frame of the press, and the other ends, after passing around shieves on the lever, are wound up on a windlass. On the shaft with the windlass is a spur-wheel, and above it is another shaft, having a pinion meshing in the spur-wheel. On this latter shaft are two cranks. Two persons can operate the press by these cranks with perfect ease, and press a bale by making twenty-eight revolutions with the crank. There is no method of exerting continued manual labor equal to cranks, and when with the cranks are combined a progressive lever power, increasing in a ratio greater than the increasing compactness and consequent resistance of the hay, there is thus formed a perfect arrangement of mechanical powers, exactly adapted to the purpose designed to be accomplished.

This we understand to be the effect produced in the above hand press, and there must, therefore, be a large saving of time as well as hard labor. Those desiring hand presses for hay or other purposes, will find it to their interest to examine the above, or address the inventor agreeably to advertisement in another column.

Sowing and Covering Clover Seed.

Eds. Cult. and Co. Gent.—For a harrow to scratch in my clover seed with last spring, I loosened the teeth of my wheel horse-rake, so as to let them drag behind, instead of hooking forward, as they do when raking hay. Then to the end of each tooth I fastened a block about five inches long, having a five inch spike through each end of it. It made as effectual and as harmless a harrow for the purpose as I ever used. It seems to me a sower might be easily attached to such a machine, that would distribute the seed evenly, and not be much affected by the wind. A trough, for holding the seed, might be fastened under the axle, and made about as long as the wheels will permit to ride between them, with apartments in it to prevent the seed from running together, to one end or the other, as the ground may happen to be inclined. Holes for the seed to fall through, might be placed about three inches apart, in the bottom, and a slide, with corresponding holes through it, to bring the seed over the former, might be worked by a cam at one end of it against the spokes of one wheel, and a spring at the other end, to throw it back as often as a spoke has passed and moved it the opposite way. I fear my awkward description will not convey the idea very plainly, but I do not see how to make it clearer. G. H. *Medford, N. J., 9 Mo. 8.*

White Mountain Cake.

One lb. flour, one lb. white sugar, half lb. butter, six eggs, one tea-cup of sweet milk, one *small* teaspoon of saleratus dissolved in the milk—two teaspoonfuls of cream tartar mixed with the flour. Bake in jelly-cake or Washington pie-tins, four in number.

Frosting.—One sheet Cooper's isinglass dissolved in a *small* tea-cup of boiling water. Stir into it two lbs. pulverized white sugar. Flavor it with lemon, vanilla, or almond, (and put a tablespoonful of the same flavoring you use for the frosting into the cake before baking.) When the cakes are baked, put one upon a plate ; frost the top and sides over ; then lay on another, evening off the edges with a knife ; frost that in the same manner, and so on till all are done, and the "White Mountain" is finished. It is an elegant ornament for a supper table, and a handsome desert for dinner. It is a French cake, and called "Mont Blanc."

This way of making frosting is good for all kinds of cake. Sophie.

Illinois State Fair.—The State exhibition of Illinois was concluded on Friday last, but up to the time of our going to press no conclusive report of the doings had been received. The chief attraction of the show was the high premiums ($4,500) offered by the State Society, together with the Ill. Cen. R. R. Co., for the best steam plow. Besides Fawkes' plow in operation, there was another—the invention and make of Van Doren & Glover—which plows, digs, ditches, reaps, mows, and also gives motion to stationary machines. We have not yet learned the successful competitor. We also learn that before the formal trial took place, Fawks plowed an acre, in one instance in ten, and another in twelve minutes, with his celebrated "Steam Plow."

Indian Corn—Harvesting.

Subjects relative to the corn crop have had frequent discussion in our columns the present season, nor have we yet done with them. Having grown our corn, we must now harvest and dispose of the product, and we invite articles from correspondents in regard to the best methods and management of the same. We now offer some hints on harvesting—a subject on which we have written so often that we may repeat, perhaps, ideas advanced before.

Some farmers follow the practice of cutting only the portion of the stalks above the ears, allowing the latter to stand some weeks later, and then picking and husking in the barn. They claim that this secures the better portion of the stalk before it is injured by frost, and allowing free access of sun and air to the grain, hastens its ripening, also ensuring better and heavier grain than any other mode. They say it requires less labor—less heavy lifting of corn and stalks—as less fodder is secured, and—but we must leave the question of topping corn to the advocacy of those who practice the same—we always *cut up* ours. We will only state a fact observed not long ago. A neighbor, raising as much corn in proportion to his stock, as ourself, topped his corn, saving only the upper portion of the stalks for fodder. He began to feed hay before New Year, while our stalks lasted into March, and brought his cattle through the winter in no better order than our own. His top stalks were soon gone, and his butts and husks left in the field, eaten and *wasted* much sooner, and with much less benefit to his stock and farm, than if he had followed the system of cutting at the ground and storing the whole product.

When corn is fairly glazed, it is fit to cut up at the root,—so as to secure all the fodder, that portion "only fit for manure" included—but it is in its place, (the barn-yard,) and of some value there as an absorbent, which can hardly be said of stalks left in the field to plow under. If a severe frost comes before corn glazes, or if one is apprehended, the sooner it is cut up the better, but a slight frost may occur at the time, of little injury to the fodder. We would cut up frosted green corn, to save it from that total drying out of the juices, which seems to take place if allowed to stand on the hills, and which immediate cutting prevents in greater or less degree. If not hurried by fear of frost, corn may better stand until the husks begin to loosen, to facilitate their removal in securing the grain.

The implement used in cutting up corn has been much improved and cheapened of late, and we now have corn-cutters of fair character—light, efficient, and durable. Taking two rows at a time, about six hills are placed together for a bundle—tops to the left is most convenient. The binder follows with a small bundle of wheat or rye straw, from which he selects a band, and stooping, ties the corn as it lies, if the cutter has taken the care he should to lay the stalks evenly in the bundle, otherwise they should be raised erect to bring them even, and may then be tied and left standing. The bundles may be placed in stooks of from six to ten bundles, and bound near the top with two bands, a double one about breast high, and a single one higher up. Thus stooked they will cure in good order, and may stand for weeks, or even months without injury.

Another method is to cut and set up some twenty-five or thirty hills around one hill, without binding into separate bundles. This saves time in harvesting, but the stalks are not as convenient either to husk or to feed out, as when bound in the manner above noticed. If either of the many husking machines are to be employed, it would be the better mode, as they all take the stalks separate and unbound, and they can be bound after husking as easily as before.

A mode of cutting and binding corn by the use of a corn-jack has been recently brought to our notice, but we have not yet had opportunity to give it a trial. We have described it and its advantages in the following brace of paragraphs:

A stake or post two and a half inches square and five feet long, has holes bored through at different hights (to accommodate it to different sized stalks) near the top for diagonal arms, projecting some eighteen inches on each side—these fitting loosely, so as to be removed at pleasure. The lower end is sharpened so as to be set in the ground firmly without trouble. It is placed where it is wished to make a stook, and the corn as cut is set up between the arms, which support it nicely, until enough for a stook is ready. Then we have four bundles ready for tying without lifting or moving, and in place for a permanent stook. Tie them, slip out one arm, loosen and remove the stake or jack, and bind the stook together. It will stand firmly against a heavy wind—it is a small stook that will cure well, and when we wish to draw in before husking, is in good condition for that work.

Two men, we are told,—one to cut, and one to set the jacks (two jacks are needed in this case,) and bind bundles and stooks,—can harvest corn in this mode more rapidly and easily than in any other doing as good work. There is no lifting the corn from the weeds and pumpkin vines—it is in good and firm position at one operation, and the implement is so simple that any man who can use an inch augur can make one. Besides, the job is finished up; no corn is left lying to be caught in a storm, as is sometimes the case when cutting goes on faster than binding.

Facts warrant the statement that corn fully ripened on the stalks, is heavier than that husked before it becomes fully dry, and that there is some gain in grain—accompanied with a loss in the value of the fodder—when the corn is well dried on the hill before cutting. The farmer must decide as to the time for himself—more frequently, however, we let circumstances decide for us, cutting our corn when our work and the weather will allow us to do so. This year, however, we shall give especial attention to the corn fodder—it is, with us and and thousands of farmers, a substitute for the hay crop, which is very light the present season in many localities.

Improving the Farm.

There are farmers who cannot see room for improvement in the character and management of their farms. The majority, however are deterred from the work by the want of means, time, and *knowing how* to begin. The way to begin is on a moderate scale, commensurate with the time and means at command—but let a beginning be made with a plan for regularly extending improvements. In underdraining, take that part of the field first which needs it most; do it well as far as done, and open surface drains on the balance of the field. The character and productiveness of the field will be improved and increased—it will pay a profit on the outlay for improvements. Another year experience will show better how to go on with the work, and no farmer will cease in such efforts at *improving the farm*, as long as he finds them profitable. It is the same with plans for more extensive manuring, for more thorough cultivation, for more systematic winter care of stock, &c., &c.

Notes for the Month.

DEATH OF JAMES PEDDER.—We regret to announce the death, at his residence in Roxbury, Mass., on the 27th ult., of JAMES PEDDER, senior editor of the Boston *Cultivator*, in the eighty-fourth year of his age. He was born at Newport, Isle of Wight, July 29th, 1775, and through his long life was a hard working and industrious man. After filling several stations of eminence in the Old World, he came to this country, in 1832, and has since been largely interested and engaged in agricultural improvement. For the past sixteen years he has been connected with the Boston Cultivator, to which his labors have been entirely bestowed. Mr. PEDDER was a ready and earnest writer, and a large number of the articles furnished for that journal, as those of correspondents, were written by his own hand. He was a kind and genial man in all the walks of life, and his circle of friends was large.

TWO NEW STRAWBERRIES.—SAMUEL MILLER of Lebanon, Pa., who is well known for his interest in fruit culture, has sent us plants of two new strawberries, for the purpose of testing the quality, known as the *Golden-seeded* and *Jeseie Reade*. The former is hermaphrodite and the latter pistillate. We have understood these sorts were remarkable for their large size—our correspondent remarks, "both are very productive, handsome in appearance, of the largest size, and fine quality for so large a berry, better than Hovey or Wilson, but may not prove equal to the latter as a market berry, as they are not so firm." We are glad to perceive that the plants are offered for sale at a moderate price.

IMPORTATION OF STOCK.—Quite large additions have recently been made to the imported stock of our country. Among them we may mention the Cleveland Bay horse "Symmetry," purchased by Sanford Howard for Dr. JOHN R. WOODS of Albemarle county, Va. Symmetry is four years old, and was bred by Mr. J. DANIELS of Yorkshire, England.

The ship Antartic at New-York, brought out one Durham bull and heifer, the property of JAS. O. SHELDON, Geneva, N. Y.; bull Grand Duke of Oxford, roan, calved 1856, sired by 2d Grand Duke, bred by Captain Gunter, Netherby Grande, Yorkshire; heifer Miss Butterfly, roan, calved 1857, sired by Master Butterfly 2d, bred by G. Murton Tracy, Esq., Edenbridge, Kent—one South-Down ram, for SAMUEL THORNE, Thornedale, Dutchess Co., N. Y., from the flock of Jonas Webb, Esq.—thirty South-Down ewes and two rams, five and a half couple of ferrets, four brace wood pheasants, three very fine tame lop-eared rabbits, one brace pointer dogs, one brace retrievers, and one brace Scotch Shepherd dogs, the property of R. A. ALEXANDER, Spring Station, Woolford Co., Ky. The sheep were selected from the flocks of the Duke of Richmond, Sir Robert Throckmorton, Jonas Webb, Esq., G. Sexton, Esq., and H. Lugar, Esq.

At Boston twenty-three head of Ayrshire cattle and eight Black-faced sheep, all purchased by Mr. Howard, have arrived. The cattle were for H. H. PETERS. Southboro, Mass., and the sheep for ISAAC STICKNEY of Boston.

MILLET AND CANARY GRASS.—The millet sent us by J. CASE, Esq., of Troy, Pa., grown from the "honey blade grass seed," is the true Hungarian grass of the west. The other head enclosed is the Canary grass—*Phalasis canariensis.*

PORK—*How much to a Bushel of Corn?*—This is a question which is often asked, and it is also often answered by those whose experiences go to prove the facts of which their statements consist. B. P. Kirk, of Hornville, Chester co., Penn., furnishes an account to the N. Y. Tribune, of a "debt and credit" kept with his pig. It was of the Chester county breed, and was fed occasionally with bran, but it was reduced to the equivalent of corn, and counted in the following statement. He fed 49 1-10 bushels of corn, at 60 cts. a bushel, and added the first cost of the pig, at two month's old, $5—making a total of $34.46. At seventeen months old the animal weighed 649 pounds, and sold for 7½ cts. per pound, making $48.67, thus affording a profit of $14.21.

☞ We learn that Rev. HENRY WARD BEECHER has recently purchased from the herd of Col. S. D. HUNGERFORD of Adams, N. Y., for his farm near Peekskill on the Hudson, several very fine animals, consisting of a yoke of four-year old steers—Short-Horns—two young Ayrshire heifers, Flora and Princess, and the young Ayrshire bull Tiger, all choice specimens.

WINE IN CONNECTICUT.—We learn from a correspondent, that Dr. HORATIO HOLMES of Stafford Springs, Ct., is doing considerable at the manufacture of native wine. In speaking of a visit to his residence, our correspondent says: "I found some fifty barrels of very good wine in his cellar, mostly made from the native grape of this vicinity—some of it, of six and more years of age, is really very excellent." He also speaks of a new seedling strawberry upon Dr. Holmes' grounds, of the Alpine flavor and shape, which he thinks worthy of cultivation. It is hardy, and a profuse bearer.

☞ Among the strangers present at the show at Dundalk of the Royal Agricultural Improvement Society of Ireland, was LUTHER H. TUCKER, Esq., one of the Editors of the "*Country Gentleman*" and "*Cultivator*," published at Albany, State of New-York. Our readers are familiar with those well-conducted journals, from the extracts which we have frequently transferred to our columns. Mr. TUCKER has been engaged for some months in an agricultural tour on the Continent, and we have read his sketches, as they appear in the "*Country Gentleman*," with great pleasure. We regret that he was under the necessity of restricting his stay in this country; but as we had the pleasure of a call from him, we endeavored to put him in the way of seeing some of our best things, before he finally left us, and we trust that he has taken with him to "the Land of the West" a favorable impression of "the Emerald Isle."—*Irish Farmer's Gazette, Aug.* 6.

CHUFAS.—I notice in the August Cultivator, an article on the Chufa or Earth Almond, written by HENRY F. GIFFORD. I have raised some of the Chufas for two years, and my experience differs from the opinion of Mr. Gifford. I have also several patches of the grass which he describes as identical with the Chufa, and which I have not been able to eradicate. But in the opinion that the nut grass is identical with the Chufas, your correspondent is certainly mistaken. Last year, through press of business, I neglected to dig my Chufas, and though there was a fine crop, none of them have made their appearance this year, and where they grew two years ago none have made their appearance since, from which I infer that their vitality is destroyed by freezing. I am confident I could destroy the nut-grass by one season's fallowing, but in the cultivation of melons or other crops, some of it is pretty apt to live over. J. L. FISH. *Painesville, O.*

HOW TO MAKE AN OBSTINATE HORSE PULL.—A writer in the Cotton Planter, gives the readers of that journal his method of obtaining a pull out of an obstinate horse, and also claims to be the originator of the plan. He says: "Take a small rope, (a plow line for example,) double it, make a loop of the double end, and draw it snugly around the under jaw of the animal, just behind his front teeth, with the loop underneath. Thrown the loose end over your shoulder, and "walk in the way he should go," holding fast and pulling steadily and firmly. Don't be troubled about him, for he will follow without fail, after he has discovered how you have "got him." This will also compel an animal to stand quiet to receive the bridle or collar."

TIME TO SOW TIMOTHY.—Mr. YANCEY, of Iowa, advances the idea in the Rural New Yorker, that the only proper time to sow timothy and red top, is when the seed becomes so ripe that it falls to the earth of its own accord—in this latitude, from the 20th of July to the middle of August. A great many failures occur in sowing in the spring and fall with grain crops, and many farmers have come to the conclusion, with Mr. Y., that such seeding *won't pay*; that it is better to sow it alone, and at the time above stated.

☞ We learn that the Board of Trustees of the N. Y. State Agricultural College, at their meeting at Ovid on the 23d inst., unanimously elected Maj. M. R. Patrick President of that Institution The college buildings are in a state of forwardness, and will be roofed in by the middle of October. We are promised a report of the proceedings for publication hereafter, and have only time this week for a mere announcement.

Kerry Cattle and Shetland Ponies.—Just before his departure from Liverpool, the writer saw at the Adelphi stables in that city, several specimens of these singular breeds in charge of Mr. Bell, who was soon to ship them to the United States. They had been purchased by Mr. Howard of Boston, during his recent tour, in addition as Mr. Bell stated, to 32 head of Ayrshires, a fine Cleveland stallion, a number of the Scotch blackfaced sheep, and a Cotswold ram. The Kerry cattle were alluded to in a letter written from Ireland. They will be regarded quite as curiosities here from their stunted size, for they come from among the hills where they can find only the poorest sustenance, and, indeed, they are said to require little more food or shelter than the goat. Scarcely sufficient credit, by the way, has been given in this country to the efforts made by Mr. Bell in the shipments of stock at different periods for several years back. To his care and faithful attention the success of many of our most valuable importations has been due in no small degree. It is a pleasure to refer to the subject, because inquiries are frequently made by parties desiring to purchase, as to some means of securing the safe embarkation of what they would like to buy, and for the benefit of such it may be added, that any commands addressed to Mr. Bell, Adelphi Stables, Liverpool, will be sure to meet with prompt attention. L. H. T.

Pears.—Messrs. Ellwanger & Barry, Mount Hope Nurseries, Rochester, have favored us with a basket of Pears from their grounds, consisting of beautiful specimens of Belle Lucrative, Louise bonne de Jersey, White Doyenne, and Flemish Beauty—a present which affords abundant testimony of their skill in growing pears, however others may fail, and the savor of which will cause them to be held in grateful remembrance.

We are also indebted to Mr. Amos Fish, of Bethlehem, for fine samples of the Beurre and Bosc pear.

Isabella Grapes.—We are indebted to Hon. Z. A. Leland, of Mechanicsville, for several bunches of the Isabella grape, fully equal in size and beauty to any we have ever seen.

The Southern Rural Gentleman.—Our old friend, Dr. M. W. Philips, has become the conductor of the Agricultural Department of this journal, published weekly at Grenada, Miss The Doctor is a ready writer and an enthusiastic advocate of agricultural improvement, for which be has labored with untiring zeal for more than a quarter of a century.

Grapes.—We are indebted to Mr. John Dingwall of this city, for fine samples of Rebecca and Northern Muscadine grapes—the latter much the best specimen of the variety which we have seen.

Cheese.—According to the Herkimer Co. Journal, 1,088 boxes of cheese, weighing 67,585 lbs., were received at the freight depot in Little Falls on Monday, August 29, all of which was shipped to New York in the afternoon, and arrived at New York by eight o'clock the next morning.

Potato Sprouts for Planting.—I planted some half dozen hills of *potato sprouts*, May 23, on rather light sandy loam, without manure—sprouts averaging say one inch in length—about one dozen in a hill. They were rather slow in making a show above ground—stalks very slender and feeble in appearance until about 1st August. I began to think the experiment a failure with me. I have this day dug a part of them, and find they turn out full as well as those grown in the ordinary way. The potatoes fair, medium size, and very uniform—no very small ones. A. G. Danielson. *Clifton Springs, N. Y.*

The exhibition of the New Jersey State Ag. Society is reported the most successful one ever held by the society. The weather was good throughout, and the attendance was large and enthusiastic. It is estimated that over twenty thousand visitors were upon the ground the last day of the show.

The Illinois State Fair closed the 10th instant, after a very successful display. The large prize offered by the society for the best steam plow, which constituted the greatest attraction of the exhibition, was not awarded, owing to the bad state of the ground upon which the trial took place. It now stands adjourned until Mr. Fawkes returns from the fair of the American Institute, in New York, where he is engaged to be present with his plow this week.

Australian Wheat.—The following note accompanied the sample of wheat alluded to in it, and for which we tender Mr. Williams our thanks. The sample is, as may be supposed from its weight, an extraordinarily fine one, and will be divided between two of our wheat-growing friends:

New-York, Sept. 17, 1859.

Messrs. Tucker & Son—My friends, McPherson, Francis & Co., Melbourne, Australia, sent me a sample of wheat grown at Belfast, Australia, "said to weigh 67 pounds per bushel imperial." Herewith you have a part of the sample, which you or some of your friends may like. J. Henry Williams.

The Barley Crop.—The *New England Farmer* speaks of barley as a grain raised to some extent all over New England, and thinks it "ought to take the place of hundreds of acres that are devoted to oats, as it is better adapted to seeding down land with, than oats, requires less seed, ripens as well, and is admirably fitted to our short, hot summers,—the average product will be nearly as much as oats, and when harvested, is worth a third more for horses, hogs, poultry or cattle." If the editor will look over the report in our State Transactions for 1858, of the "Agricultural Discussions during the State Fair," he will see the estimation in which the barley crop begins to be held by the farmers of Central and Western New York, who have had some years extensive experience in its culture. The present season's crop will induce many farmers to discontinue its culture entirely, spring barley especially, winter barley having proved a more remunerative crop. But it requires the best soils, and presents few points of comparison with oats as a substitute for that crop.

The Steam Plows at Chicago.—We learn to-day that Fawkes' Steam Plow came off victorious at Chicago, receiving the Gold Medal of the U. S. Ag Society, and the $3,000 offered by the Illinois State Ag. Society, and the Illinois Central Railroad Company.

Chufas and Nut Grass.—I agree with Mr. Fish, that Chufas and Nut grass are different things. I have raised both. Mr. Gifford will see, if he examines them, that the kernel on the Nut grass is nearly round, and Chufas are long. I thing his hogs will quickly tell the difference, or if they eat Nut grass as well as they will Chufas, he will have no trouble in getting rid of it. L. Risley. *Cedar Rapids, Iowa.*

Sheep and Dogs.—The Cincinnati Gazette publishes the statistics of the number of sheep killed and injured by dogs in the state of Ohio, with their estimated value, as reported by the township assessor to the auditor, August 1, 1859. Of the eighty-eight counties in the state, the total damage to sheep by dogs in 1858, is estimated at $146,740, or an average to each county of $1,667.58.

☞ We are unable to furnish the information desired by "A Subscriber" at Lisbon, Ill.

Willows Injurious to Drains.

Eds. Cult. and Co. Gent.—As the subject of underdraining appears now to claim a large share of attention from the farming community, I have thought that any facts which may have an important bearing upon the subject, might be acceptable to some of your readers.

I wish to advise the inexperienced not to plant willows near where they expect to lay drains, nor to lay drains near willow trees until after the latter are killed. I have had two drains of three inch tile entirely stopped by willow roots; one in two summers, the other in about two and a half. One of them (which was laid three feet deep,) was dug out again, as far as it had been stopped, this last spring. About twenty of the tile, opposite a willow, were entirely filled with fibrous roots, matted together, and holding a little sand. As soon as these were taken out, the water came from the drain above in a stream as large as the tile would hold, and continued running so for several weeks, until it began to fail on account of dryer weather. G. H. *Medford, N. J.*, *9 Mo* 8.

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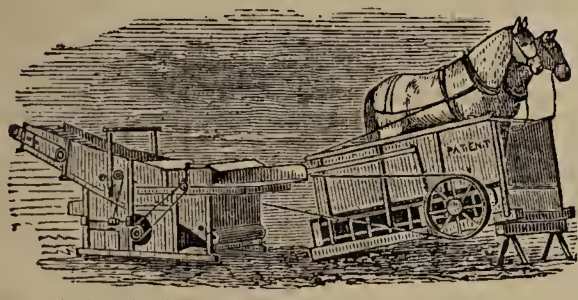

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2. Transplanting Small Trees.
3. Apples for Market.
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6. Select List of the Newer Pears—Dwarfs.
7. Plums—The Blackberry—Strawberries—Grapes—Insects on the Apple.
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2. Dairy Economy—Winter Butter—Damp Stables—Wintering and Stabling—Fodder, &c.
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5. Transplanting in Autumn and Spring.
6. Early Melons and Squashes.
7. Wool Table.
8. Cleaning Seed Wheat.
9. To Make Farming Profitable.
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This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, while the Publishers, in order to promote its extensive circulation, are prepared to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,
LUTHER TUCKER & SON,
Oct. 1, 1859. Albany, N. Y.

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THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD · To Improve the Soil and the Mind. SERIES

Vol. VII. ALBANY, NOVEMBER, 1859. No. XI.

Published by Luther Tucker & Son,
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Associate Ed., J. J. THOMAS, Union Springs, N. Y.

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The Cultivator has been published twenty-five years. A New Series was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at $1.00 each.

The same publishers issue "The Country Gentleman,' a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 a year. They also publish

Fall Plowing.

Two active workmen (we but repeat the saying) may be secured by any farmer for the winter at comparatively small expense. Fermentation and Frost, if his fields are plowed in autumn, will be busy with their culture through the inclement months, preparing food for plants and fitting the soil for their growth. Decomposition and disintegration are more or less active from fall to spring, and most soils, if properly plowed in autumn, are benefitted by the agents thus set at work. Let us offer some thoughts on the advantages and disadvantages of autumn cultivation, together with some directions for performing the work.

1. Low lands, such as are usually most benefitted by fall plowing, are generally in their best condition for the operation at this season of the year. Very often they are too wet to plow in spring until the season for seeding is far advanced, and the product is lessened by the delay, as well as the soil injured by working when too wet—becoming baked and lumpy, and requiring several years' time to recover its usual state. Heavy clays, especially, must be plowed when just right as to moisture, or they may almost as well remain without tillage. Heavy loams are often in the best condition for plowing in the fall, and can be sown or planted more seasonably, and with better results, if this operation is performed than if neglected.

2. Teams are generally in better condition for plowing in autumn; more inured to labor, and in less pressing demand for other employment on the farm. In spring a variety of work presses upon the attention of the farmer, which must be done as rapidly as possible, and it is well to "lighten the load" as far as may be by forethought and precaution.

3. Stiff, heavy soils, plowed in autumn, besides being in good condition for the work, undergo by the action of water and frost, a more thorough disintegration—clays, with proper provision for surface drainage, are pulverized and crumbled; heavy loams and hardpan lands are acted upon in like manner, and with like beneficial results to the soil and succeeding crop.

4. Heavy and coarse sward land is better mellowed and subdued when the inverted sod is exposed to the action of the winter weather. Turned over late in the season, all vegetation ceases, the grass roots are frozen out, and many weeds share the same fate; in spring we find the land bare and mellow, ready with a thorough harrowing for any appropriate crop. The surviving weeds are less likely to sprout than if turned under in spring, and the turf is better prepared by its more advanced state of decay, for feeding the products which follow.

5. Though *late* fall plowing may have little time for fermentation or the decomposition of the vegetable matter buried by the plow; this decay still goes on to some extent, and by the time the growing crop needs it, usually arrives at the proper stage to supply its necessities. But the frost works with a will, and under proper conditions produces a mechanical amelioration of the soil scarcely possible under any other process.

6. Fall plowing disturbs the quarters arranged by various insects for passing the winter in the soil, thus destroying large numbers of these pests with their eggs and larvæ. This is a minor advantage, but one worthy of consideration, especially on lands infested with the larvæ of the May-bug or the wire worm.

The principal objections to fall plowing are the following:

1. The loss of that fresh, friable condition of soil, readily permeable to air and moisture, and the consolidation of the soil by long exposure to changing and stormy weather. This on light lands is a serious objection to autumn plowing. The same is true of any soil not provided with sufficient drainage to prevent water from standing for any time on or near the surface.

2. Another disadvantage is the loss of vegetable matter, and of its gases while decaying. The latter is but a small loss if the plowing is done late in the fall, but often on hill-sides, a large part of the soluble and floating organic matter is washed away by the heavy rains of winter and early spring-time. The soil is also consolidated by the same influences. Heavy swards thus situated would sustain less injury than light swards or stubble lands.

And lastly, a few hints on the manner of performing the work:

1. Do it thoroughly and in a workmanlike manner.

2. If the soil is at all liable to standing water in the winter, it should be plowed in narrow lands, and the

water-furrows carefully cleared and free outlets provided, so that all surface moisture may at once drain away. Unless this is attended to, it is of little use to plow low lands in the fall. If covered with water until spring, the frost has no mellowing effect, and very little decomposition takes place—the soil is only hardened by its exposure.

3. In fall plowing, the furrows should be deep and narrow, so as to expose as much surface as possible to the action of the frost, and it matters little how rough the work may be, provided the whole surface be inverted by the plow.

In conclusion, we would again urge the importance of preparing before winter sets in, as far as may be, for another year. We hear the complaint very frequently that late seeding has injured one or more of our spring crops, and that the most successful growth has been made upon lands plowed in the fall. Spring plowed land can also be given more attention, with the lessened demand upon the team and time, and all branches of farming feel the influence of the workmen who so cheaply and faithfully assist in forwarding the labors of the farm.

Fruit Grower's Society of Western New-York.

The autumn meeting of this Society was held at Rochester on the 22d ult., and occupied three full sessions in one day. The attendance was large. The subjects under discussion were Summer Pruning of the Grape; best new Grapes; best Pears, and the Smaller Fruits generally.

On the subject of *summer pruning the vine*, various opinions were advanced; but the prevailing expression was in favor of a moderate thinning and shortening of the shoots. Some of the most successful cultivators left at least five leaves above the bunch of fruit, and removed all small shoots which did not bear. W. B. Smith, of Syracuse, in allusion to the opinion that "nature should take her course," said that this could not apply to artificial cultivation—that if a rich soil and manuring were adopted, a corresponding pruning must be resorted to. Without this, the whole will become a swamp of foliage, and the fruit would not ripen. E. W. Herendeen, of Macedon, said, that as the sap was prepared by the leaves to form the fruit, a sufficient supply of leaves must be left to elaborate it. To prune severely in summer would injure the health of the vine. S. H. Ainsworth, of Bloomfield, stated that his neighbor, Wilcox, had both pruned and unpruned vines—the former ripened its fruit at least *ten days* before the latter, and the fruit was far better—the unpruned vines formed a heavy mass of leaves and branches on the trellis four feet thick on the top, and they bore but few grapes, and these small, mildewed and worthless. The pruned produced at the rate of over 16,000 pounds per acre—the bunches fine, large and compact. Another member stated that the practice of laying down and covering the vines with two inches of earth for winter protection, had caused them to start earlier in spring, and mature the fruit sooner.

The Best Varieties.—Several members pronounced the *Hartford Prolific* the earliest, but its liability to drop its fruit was an objection. The *Diana* was highly commended by all, and it was unanimously recommended for general cultivation in Western New-York. The *Concord* follows soon after, but was generally regarded as far inferior in quality to the *Delaware* and *Diana.* The Delaware had been found to ripen from two to three weeks before the Isabella, and the Concord ten days to two weeks. The *Northern Muscadine* was quite early, but dropped its fruit badly. P. Barry recommended caution and thorough experience—the Diana was the only one of the new sorts which he had tested sufficiently. The *Clinton* grape was recommended for its vigorous growth, extreme hardiness, and long-keeping qualities—A. Covey of Penfield, had kept them till February, and found them to improve in sweetness the longer they were kept. C. L. Hoag of Lockport, had found the Diana an excellent keeper. Dr. Miner of Rochester, considered the Clinton worthless as a table grape, as compared with the Diana, which always ripened, even when he never obtained a ripe Isabella. B. Hodge of Buffalo, remarked that the Isabella was often called ripe as soon as browned,—but that when fully ripe it was a dead black.

Pears *for general cultivation*—Among the varieties especially commended were the following: *Louise Bonne de Jersey*, for its extensive productiveness (on the quince); *Tyson*, for its handsome growth and excellent fruit; *Virgalieu*, for its productiveness, and the great popularity and high price of its fruit; *Sheldon*, for its superb growth on the pear stock, and great excellence; *Bartlett*, for its admirable fruit and early bearing; *Belle Lucrative*, for its superb quality; *Seckel*, for its hardiness, great crops, and delicious flavor; *Flemish Beauty*, for its general perfection, needing, however, to be picked early; and the *Lawrence* and *Winter Nelis* as the best winter pears. The *Howell*, *Brandywine*, *Beurré Diel*, *Washington*, *Duchesse d' Angouleme*, *Giffard*, *Rostiezer*, *Anjou*, and *Easter Beurre*, were also highly recommended by different members. The only objection to the *Vicar of Winkfield* was its excessive bearing, and ordinary cultivators would not prune and thin sufficiently to make the fruit excellent. A. Parry of Clarkson said that he found the fruit of the Louise Bonne of Jersey one-third larger when raised on dwarfs. P. Barry remarked that although the Duchesse d'Angouleme was preferred as a dwarf, yet on pear stocks the fruit continues to improve as the tree grows older, for twenty or thirty years. S. H. Ainsworth has a tree of the Louise Bonne of Jersey twelve years old, with a barrel of pears on it.

Smaller Fruits.—The *Black-cap raspberry* was highly recommended as one of the best and most desirable sorts—to be cultivated by horse-labor, in rows 8 feet apart, and 3 feet in the rows—to be properly thinned, and pruned 6 feet high. A wire trellis was recommended for canes. The *New-Rochelle blackberry* was regarded as the most productive sort, the soil to be rich, the richer the better, and well cultivated—the *Dorchester* less productive, but of higher flavor. Of *currants*, the *Cherry*, *White Grape* and *Victoria*, were especially recommended.

Maple Leaf-Cutter.

Messrs. Tucker & Son—I inclose a few specimens of the larvæ of some kind of an insect, or at least I suppose them to be; but while I write, I perceive some of them are thrusting their heads out and are moving along something like a mudturtle.

I discovered them upon the ground in a wood lot, and at first thought them to be leaves cut by the wood-bee, but as I went on, I saw so many I began to think they must be something else, and on examination found them to consist of four or six thicknesses of leaf, and a sort of worm in the center, but did not know till now that they could move around. There were great numbers of them on the ground, and what they are I do not know. E. L. Holden. *North Clarendon, Vt.*

The insect alluded to by Mr. Holden, is the Maple leaf-cutter, *Ornix Acerifoliella*, Fitch, figured and described in the Trans. N. Y. State Agric. Soc. for 1855, page 501. It is a small moth about the size of a house-fly, of a brilliant steel blue color, with an orange yellow head. It may be seen on and around maple leaves, the latter part of May. It drops its eggs on the leaves and the worm from these eggs cuts two small circular pieces from the leaves and ties them together with fine silken threads, residing between them like a tortoise in its shell, thrusting out its head to feed on the leaves, and to move about over their surface. As it increases in size, it cuts larger pieces of the leaf and ties these over the first ones, till it finally has three pieces over its back and two or three beneath, the top-most one being nearly half an inch in diameter. Thus covered, when fully grown it drops to the ground, among the fallen leaves, where it lies through the winter, and changes to a winged moth in the spring.

Every summer, round holes are seen, cut in the leaves of the maple by this insect. In August, 1850, it was so numerous, and cut and destroyed the leaves in many places to such an extent, that the trees appeared as though scorched by fire; and it has again been almost as common the present year. A. F.

The New-York State Fair.

Nine years ago there was held near this city the Tenth Exhibition of the N. Y. State Agricultural Society. By reference to the editorial account of it published in the Cultivator of the succeeding month, it appears that in the amount of receipts and number of entries its success was greater than that of any of the Society's previous Shows. Rains preceded the opening, and occurred during one night, but the weather was generally favorable. The Treasurer reported the pecuniary result at $10,465.61, but it should be remembered that the price of admission was then 12½ cents, instead of 25, as at present. "The horses and most of the cattle were stationed in sheds provided for them." There were 286 entries of the former, 475 of the latter, and 567 of sheep.

The following paragraphs, then written, are as true at this time as they were in 1850; and if we republish them now, it is because we think we may perceive among the numerous changes in the interval that has elapsed, a prevailing disposition to regard the value of our Agricultural Shows as resting upon no higher basis than the magnitude of the prizes they bring to one set of exhibitors, the publicity they give to the wares of others, the enjoyment they afford to those who attend them for pleasure, and the balance they leave in the treasury of the Society holding them. All these ends, however important, should not lead us to forget that our Fairs were instituted as means toward the real and permanent advancement of our Agriculture:

> "On the part of the competitors, the principal benefit is not the taking of prizes; it is the opportunity of bringing their animals or articles prominently to the notice of thousands of persons to whom they would otherwise never be known. The objects are not only seen, but they are *compared*, and by comparison, their relative defects or excellencies are made apparent. It is in this way, only, that correct knowledge can be obtained. A farmer who breeds any kind of live stock can form no safe opinion of its actual value without comparing it with other stock of the same breed. So, too, of the mechanic, in reference to his various productions; and in every branch of industry, improvement can only be estimated by comparison.
>
> "Nor is the advantage of comparison of less consequence to purchasers than producers. In procuring a horse, a cow, a yoke of oxen, or a plow or other implement or article, it is, of course, desired that it should possess the properties which would fit it most perfectly for the purpose to which it is to be applied; and by having side by side the various descriptions, a discriminating eye is able to select the best, with almost infallible certainty. These advantages are distinct and independent of the awards of premiums. The people, so far as they have the opportunity of seeing for themselves, generally form their own opinions, and are but little influenced by the decisions of others."

Last week, upon the same grounds occupied in 1850, the Society's Nineteenth Exhibition took place. Of it we may say, as of its predecessor, that it has surpassed in some respects all that have gone before it. The nine years have by no means been unfruitful in improvement. The receipts have risen from less than ten thousand five hundred dollars, to over *eighteen thousand*, and the entries this year number no less than three thousand five hundred and fifty-one—including 508 entries of Horses, 362 of Cattle, and 604 of Sheep. The custom at the beginning of staking out the cattle over the field or under the trees, like the stock at a Mexican ranch, had given way some years ago to a partial provision of sheds, but every animal on exhibition this year was under a roof. Nothing in fact which the writer has seen at home or abroad, in the arrangement of the stalls—either as regards the comfort of the animals or the convenience of the spectator—was superior to that adopted here.

The Show itself was in no respect one that New-York need wish to disown—an opinion expressed, unanimously we think, by the numerous visitors present from other states and her Majesty's dominions. If the *Cattle* were not out in so great force numerically, as they have sometimes been, they never formed a more prominent feature. The chief breeds were all represented by choice animals. Our best breeders of Short-Horns, generally, did all they could to prove that allegations of tenderness and deterioration in American ownership, are unfounded. The Devons fully maintained the rank they have occupied before; the Herefords were in good force, and the show of Ayrshires and Aldermeys was every way creditable. *Poultry* were so well and so largely shown, that few professed "Poultry Exhibitions" would compete with the turn-out here, and the building devoted to the purpose became an important part of the general whole. *Fruit* was wonderfully good. All the Mechanical portion of the Exhibition was excellent, embracing both *Farm Implements* and *Machinery* of various kinds. One of the best features in the exhibition, too, was the show of *Sheep* in all three of the old divisions, while the Shropshires were made into a new and separate class. There was a little deficiency in the *Dairy* department. The *Horses* were out in large numbers, but included less merit than was expected. Everything went on smoothly. The buildings were all well put up, most commodiously arranged, and properly adapted for their respective purposes. There had been some feeling as to the exclusion of carriages from the grounds. This is a question, however, on *both sides* of which much may be said. The general satisfaction with which the results of the Show appear to have been regarded, will have the influence of strengthening the opposition on the part of the Society to the admission of vehicles. With fine weather, it has been shown that the public interest in a purely agricultural exhibition, manifests a gratifying increase. The past week saw no "trials of speed." The Society having never had recourse to a horse mania, or to any side issues to attract attention to her shows, stands forth to represent the rural interests of the state. For the farm, she points to implements and modes of culture; for the stock-yard to improvements in domestic animals of *all races;* for the garden to all that is useful and ornamental in fruits and flowers and vegetables; for the dairy, the housewife, the mechanic and the manufacturer, to whatever, by promoting their several ends, may tend to increase the general prosperity and comfort. All these several objects are objects of permanent utility and interest. Balloon ascensions, trotting matches, and catch-penny "elephants," of every kind, may "draw" during their day. It is no more than the experience of the past nine years has abundantly taught us, that every Body instituted for the promotion of Agriculture, should avoid descending to other and lower ways of gaining a temporary popularity.

PREMIUMS ON STOCK

Awarded at the Fair of the N. Y. State Agricultural Society at Albany, October, 1859.

SHORT-HORNS—BULLS.

Best Bull, 3 years old and upwards, John R. Page, Sennett, "Hiawatha,"....... $25, Silver Medal to breeder.
2d do., Wood & Eastman, Woodville,................$15
3d do., Simeon Leland, New Rochelle,................ 5
Best Bull, 2 yrs. old, A. J. Becar, Smithtown, Suffolk. 20
2d do., A. M. Underhill, Clinton Corners, Dutchess Co. 10
3d do., W. M. Bullock, Normanskill, Albany Co.,.... 5
Best Bull, 1 year old, Samuel Thorne, Thornedale, "2d Duke" 15
2d do., Samuel Thorne, Thornedale, "3d Duke,"...... 10
3d do., Wm. Lape, Crescent, "Lape's Hero,"......... 5
Best Bull Calf, John B Garrett, Salina, "Pilot,"...... 5
2d do., D. Thos. Vail, Troy,................ Trans. and 3
3d do., Wm. H. Slingerland,............. (Discretionary.)

SHORT-HORNS—BULLS, (IMPORTED)

Best Bull, 3 years old and upwards, Samuel Thorne, Thornedale, "Grand Turk,".....................$25

DISCRETIONARY.

Hurst, Slingerland and Bullock, "Neptune," ....Dip.

SHORT-HORNS—COWS.

Best Cow, 3 years old and upwards. Samuel Thorne, Thornedale, "Miss Gwynne," $25, and S. M. to breeder.
2d do., Saml Thorne, ...$15
3d do., W. H. Slingerland, Albany, "Minnie," 5
Best Heifer, 2 years old, S. Thorne, "Favorite" 20
2d do., S. Thorne, "Gertrude," 10
3d do., Wm. Kelly, Rhinebeck, "Myrtle," 5
Best Heifer, 1 year old, S. Thorne, "Lady of Oxford," 15
2d do., S. Thorne, "Princess of Oxford,"............. 10
3d do., Wm. Kelly, "Miss Wiley, 8th,"................ 5
Best Heifer Calf, Hurst, Slingerland and Bullock, Albany, "Florence,"................................ 5

SHORT-HORNS—COWS. (IMPORTED.)

Best Cow, 3 years old and upwards, S. Thorne, "Lallah Rookh," $25
Commendatory notice of the herd of Col. Lew. G. Morris.

DEVONS—BULLS.

Best Bull, 3 years old, J. Freemyer, Fulton,...........$25 and Silver Medal to breeder.
2d do, 3 years old and upwards, E. Ottley, Phelps,.... 15
3d do, J. A. Carey, Clinton, "Orphan Boy,.............. 5
Best Bull, 2 yrs old, E. G. Faile, W. Farms, "Huron," 20
2d do, C. S. Wainwright, Rhinebeck, "Sagamore,"... 10
3d do, Webb & Rogers, Watertown, "Neptune,"..... 5
Best Bull 1 yr old, E. G. Faile, W. Farms, "Cayuga,". 15
2d do, Joseph Hilton, New-Scotland, "Empire,"...... 10
3d do, O. Howland, Auburn, "Rover,"................. 5
Best Bull Calf, C. S. Wainwright, "Sachem" 5
2d do, E. G. Faile, "Powhattan," ....Trans. and 3

DISCRETIONARY.

J. Freemyer, Fulton, his Bull, dropped March 10, 1859, Trans.

DEVON BULLS—IMPORTED.

Best Bull, 3 years old, C. S. Wainwright, ...$25

DEVONS—COWS.

Best Cow, 3 years old and upwards. C. S. Wainwright, Rhinebeck, "Helena 7th,".. $25, and S. M. to breeder.
2d do., T. Baker, Earlville, "Jenny Lind," $15
3d do., C. S. Wainwright, Rhinebeck, "Helena 3d"... 5
Best Heifer, 2 years old, Joseph Hilton, New Scotland, "Belle," 20
2d do., E. G. Faile, West Farms, "Eleanor," 10
3d do., E. Ottley, Phelps, "Matchless" 5
Best Heifer, 1 year old, E. G. Faile, West Farms, "Queen Ann,"... 15
2d do., C. S. Wainwright, Rhinebeck, "Helena 12th," 10
3d do., do. do. "Helena 11th," 5
Best Heifer Calf, C. S. Wainwright, "Helena 15th,".. 5
2d do., J. Hilton, New Scotland, "Grace," ..Trans. and 3

DEVONS—COWS, (IMPORTED.)

Best Cow, 3 years old and upward, C. S. Wainwright, Rhinebeck, "Kate Kearney," $25

HEREFORDS.

Best bull, 3 years old and upwards, Eli P. Gardner, Schoharie (if he furnishes pedigree as required)...$25
2d do do, Ambrose Bowen, Medina (Cayuga Chief).. 15
Best bull, 2 years old, M. C. Remington, Sennett (Consternation).. 20
2d do do, Ambrose Bowen, Medina (Don Juan)........ 10
Best bull, 1 year old, E. Corning, Jr., Albany, (Washington),... 15
Best bull calf, George Clark, E. Springfield,........... 5
2 do do, M. C. Remington, Sennett (Superior) Trans & 3
Best cow, 3 years old and upwards, Ambrose Bowen, Medina, (Young Matchless)........................ 25
2d do do, Ambrose Bowen, Medina,.................... 15
3d do do, M. C. Remington, Sennett (Venus).......... 5
Best heifer, 2 years, E. Corning, Jr., Albany (Flora 2d,)... 20
2d do do, Ambrose Bowen, Medina (Myrtle)........... 10
3d do do, E. Corning, Jr., Albany (Cora 2d)........... 5
Best heifer, 1 year old, E. Corning, Jr., Albany (Grace 3d),.. 15
2d do do, E. Corning, Jr., Albany (Cora 4th).......... 10
3d do do, M. C. Remington, Sennett (Stella)........... 5
Best heifer calf, George Clark, E. Springfield (Snow Bank),.. 5
2d do do, George Clark, (Geranium) ....Trans & 3

HEREFORDS—IMPORTED.

Best cow, 3 years old and upwards, E. Corning, Jr., Albany (Cora 2d).................................... 25
Best heifer, 2 years old, E Corning, Jr., Albany..... 20

AYRSHIRES.

Best Bull, 3 yrs. old and upwards, E. P. Prentice, "Dundee 7th,"......................$25, and S. M. to breeder.
Best Bull, 2 years old, John C. Hitchcock, Poughkeepsie, "Duke of Ayrshire,"..............................$20
2d do, Saml. Curtis, Flat Brook, ... 10
3d do., S. D. Hungerford, Adams, "Robt Bruce,".... 5
Best Bull, 1 yr. old, do. "Highland Lad," 15
2d Bull, 1 year old, H. D. Hawkins, Albany,.......... 10
3d do., S. D. Hungerford, "Tiger,"..................... 5
Best Bull Calf, Jas. Thompson, Ballston Spa, "Country Gentleman," 5
2d do. do., ...Trans. and 3
Best Cow, 3 yrs. old and upwards, Brodie & Converse, Rural Hill, "Peach Blow." ..$25, and S. M. to breeder.
2d do., S. D. Hungerford, "Little Dale,"................ 15
3d do., James Thompson, "Fancy," 5
Best Heifer, 2 years old, Brodie & Converse, "Flora Temple," 20
Best Heifer, 1 yr. old, S D. Hungerford, "L. Dale, 2d," 15
Best Heifer Calf, Geo. W. Harcourt, Albany, ... 5
2d do., S. D. Hungerford, "Princess,".......Trans. and 3

AYRSHIRES—IMPORTED.

Best Cow, 3 years old and upwards, S. D. Hungerford, "Challenge," 25
Cow "Bessie," S. D. Hungerford,..... ...Discretionary.
A. B. Converse, two beautiful Heifers,....Discretionary.

ALDERNEYS OR JERSEYS.

Best Bull, 3 yrs old and upwards, M. E. Viele, (Jersey) 25 and S. M. to Breeder.
Best Bull, 2 yrs old, H. S. Johnson, Po'keepsie,....... 20
Best Bull Calf, Maurice E. Viele, (J. T. Norton,)..... 5
Best Heifer 1 year old, M. E. Viele, (Violet,)......... 15
Best imported Cow, 3 yrs and upwards, M. E. Viele, Albany, (Maria,).................................. 25

GRADE CATTLE—COWS.

Best Cow, 3 years old and upwards, Mather & Moore, Albany, ...$25
2d do, W. H. Slingerland, Normanskill,............... 15
3d do., James F. Converse, Woodville, ... 5
Best Heifer, 2 years old, Henry Cooke, Rhinebeck,... 20
2d do., H. & F. Bowen, Coon & Tompkins, Medina,.. 10
3d do., Chas. E. Pease, Albany, ... 5
Best Heifer, 1 year old, E. Griffin, Clinton Corners,.. 15
2d do., Wood & Eastman, Woodville, ... 10
Best Heifer Calf, Wood & Eastman, Woodville,...... 5
2d do., L. Woodward, Saratoga,..............Trans. and 3
Best Milch Cow, W. H. Slingerland, Normanskill,.... 20

WORKING OXEN, OVER FIVE YEARS OLD.

Best yoke of Oxen, T. Baker, Earlville, ...$20
2d do., Joseph Hilton, New Scotland, ... 15
3d do., W. H. Slingerland, Normanskill, ... 5

OXEN, FOUR YEARS OLD.

Best single yoke, E. Ottley, Phelps, ...$15
2d do., A. Fitch. New Scotland,......................... 10
3d do., Luther Comstock, Kirkland,..................... 4

STEERS—THREE YEARS OLD.

Best single yoke, E. Ottley, Phelps. $10
2d do., H. & F. Bowen, Coon and Tompkins, ... 8

3d do., Isaac Miller, Valley Falls, ...Trans. and 3
To boys under 16, for training yoke of Steers best, Willis A. Winne, Schodack, ...Silver Medal.

STEERS—TWO YEARS OLD.

Best single yoke, Wood & Eastman, ... $8

STEERS—ONE YEAR OLD.

Best single yoke, Wood & Eastman, ... $6
2d do., P. S. Forbes, Bath, Rens. Co, ... 5
3d do., Wood & Eastman, ...Trans. and 3

FAT CATTLE—STALL FED.

Best Ox, 4 yrs and under 5, T. Doty, Clinton Corners, 12
Best Cow, 4 yrs and upwards, E. Sheldon, Sennett, ... 10
Best Heifer, 3 yrs old, G. H. & A. D. Gazley, Pleasant Plains, ... 8

NOTE.—Thomas Kimber of Syracuse exhibited two Oxen, aged respectively 5 and 6 years—excluded by the Society rules from competition, on account of age. The Committee recommend some suitable token of appreciation of their merits.

Messrs. G. H. & A. D. Gazley exhibited one yoke of fine Oxen, excluded for same reasons above stated; and the Committee make the same recommendation.

FAT CATTLE—FED ON HAY AND GRASS.

Best Cow, 4 yrs and upwards, G. H. Charles, Albany, .$10
Best Steer, 3 yrs old, J. Wadsworth, Jr., Geneseo, ... 8
2d do, C. Wadsworth, Geneseo, ... 3

FOREIGN CATTLE.

Best Short-Horn Bull, 2 years and upwards, J. Snell, Canada West, ...Dip. and $15
Best Cow, to do., ... 15
Best Ayrshire Bull, 2 years and upwards, H. D. Burgett, West Stockbridge, Mass., ... 15
Best pair of Working Oxen, out of State, W. R. Duncan, Ky. $15
Second pair of Working Oxen, out of State, S. Blackman, Vt $10
Best fat Ox, J. Van Alstyne, Ghent, ... 10
Best fat Steer, W. R. Duncan, Ky. 10
Best fat Cow or Heifer, C. F. Willis, Ky, ... 10

Class II--Horses.

FOR ALL WORK—STALLIONS.

Best stallion, 4 years and upwards, Geo. W. Adams, Whitehall $25
2d do do J. Vandenburgh, Rhinebeck 15
3d do do Thomas North, Middlefield, ... 5
4th do do P. W. Deitz, Schoharie ......Youatt.

FOR ALL WORK—MARES.

Best brood mare (with foal at her foot), 4 years and upwards, Ira Blakeman, Greenbush $25
2d do do. B. B. Kirtland, do. 15
3d do, M. J. Blessing, Albany 5
4th do, Chas. A. Mott, Lansingburgh ....Youatt.

HORSES OF THE MORGAN OR BLACK HAWK BREED.

Best Stallion, 4 years and upwards, Grove Bradley, Meridlan, ...$25
2d do., A. W. Swift, New York, ... 15
3d do., Martin Deyo, Claverack, ... 5
Best Brood Mare, 4 years and upwards, R. W. Macy, Chatham 4 Corners, ... 25

DRAUGHT.

Best stallion, 4 years and upwards, D. Case, Lockport (Young Norman) $25
2d do, James Boyle, Albany 15
3d do, C. Scobie, Springport (Young Sampson) 5
4th do, S. A. Rogers, Jordan, ...Youatt.
Best pair of matched draught or farm horses, J. P. Wisner, Lyons 15
2d do, Jurian Winne, Albany 10
3d do, C. Slingerland, N. Scotland (dis) ....Youatt.

THOROUGH-BRED.

Best stallion, 4 years and upwards, J. S. Schermerhorn, Schenectady (Peer) $25
Best brood mare (with foal at her foot) 4 years and upwards, P. S. Forbes, Bath, Rensselaer county (Madonna) 25
Best stallion, 3 years old, Alexander Bathgate, Morrisania (Cornet) 20

THREE YEARS OLD.

Best stallion, 3 years old, G. B. Alley, Now Rochelle, .$20
2d do, E. Gazley, Clinton, Dutchess county, ... 10
3d do, Caleb Tompkins, Mamaroneck, ... 3
4th do, J. V. Storm ....Dadd.
Best mare, J. Sutton, Warwick 20

TWO YEARS OLD.

Best Stallion, 2 years old, H Ainsworth, Philadelphia, $15
2d do do E. H. Bassett, Chatham 4 Corners, .. 10
3d do do Chas. Duncan, West Troy, ...Dadd.
Best Mare, F. G. Vandenburgh, Troy, ... 15
2d do Jas. G. Mott, Lansingburgh, ... 10
3d do A. A. Dunlop, West Troy, ...Dadd.

ONE YEAR OLD.

Best Stallion, 1 year old, Peter Van Wie, Bethlehem, .$10
2d do. do. F. M. Lawrence, Flushing, .. 5
3d do. do. Alex. Bathgate, Morisania, Dadd.
Best mare, Joseph Daniels, Bath, Rens. Co., ... 10
2d do. Jas. G. Mott, Lansingburgh, ... 5
3d do. M J. Blessing, Albany, ...Dadd.

BEST PAIR MATCHED HORSES, 16 HANDS AND OVER.

D. T. Walbridge, ...$15
2d do. J. L. Treat, Auburn, ... 10

MATCHED HORSES—FOR ROAD OR CARRIAGE.

Best pair matched horses, 14 to 16 hands, E. Milbanks, Bethlehem, ...$15
2d do. do. L, Rosekrans, Clifton Park, 10

GELDINGS.

Best Gelding, E. Milbanks, Bethlehem, ...$10
2d do. H. Beals, "Cassius M. Clay, jr.," 8
L. Rosekrans, Clifton Park, 3 years old gelding, ... 6
Seneca Dennis, Schaghticoke, best Mare, 3 years old, .. 6

SINGLE MARES.

J. R. Hemingway, Canaan, best 4 year old Mare, ...$10
E. G. Buck, Fort Edward, second best, ... 8

SINGLE TROTTERS.

Charles Robinson, Dutchess Co., best., ...$10
R. G. Clark, Argyle, second best 8
Willie Hawley, best trained colt—[Discretionary,] 5

FROM OTHER STATES AND CANADA.

Best blood Stallion, 3 years and upwards, T. G. Aycrigg, Passaic, N. J., "Gov. Wright," $15
Best brood mare do. H. L Shields, Bennington, Vt., .. 15
Best stallion, horse for all work, 3 years and upwards, T. M. Gillespie, N. J., "Arabian Marmaduke," 15
Best brood mare do. T. J. Wallace, Providence, R. I., 15
Best brood mare, 3 years and upwards, A. Jeffrey, Canada West, ... 15
Best matched horses not under 16 hands high, T. G. Aycrigg, New Jersey, ... 15
Best single mare, horse or gelding, in harness, C. S. Haines, New-Jersey, ... 10

DISCRETIONARY.

H. L. Shields, Bennington, Vt., (all work,) Brood Mare, ...Dip.

JACKS AND MULES.

Chamberlain & Whittlesey, Aurelius, best Jack, ...$20
W. J. Wheeler, Watervliet, best Jennet, ... 20
A. Strain, Albany, best pair Mules, ... 15

Class III—Sheep.

FAT SHEEP.

Best Fat Sheep, Long Wooled, 2 years and upwards, G. H. & A. D. Gazley, Pleasant Plains, ... $5
2d do. Robert Brodie, Smithville, ... 3
3d do. Jurian Winne, Albany, ...Morrell's Shep.
Best Long Wooled, under 2 years, Jurian Winne, Bethlehem, ... 5
2d do. E. Ottley, Phelps, Ontario Co., ... 3
3d do. E. Ottley, Phelps, Ontario Co., ...Morrell's Shep.
Best Middle Wooled, 2 years and upwards, R. C. Derrick, Center Brunswick, ... 5
2d do. R. C. Derrick, Center Brunswick, ... 3
Best Middle Wooled, under 2 yrs, O. Howland, Auburn 5
2d do. O. Howland, Auburn, ... 3
Best Cross Breed, 2 years and upwards, H. Bowen, Jr., 5
2d do. H. Bowen, Jr., Medina, ... 3
3d do. Jas. F. Converse, Woodville, ...Morrell's Shep.
Best Cross Breed, under 2 years, H. Bowen, Jr., ... 5
2d do R. C. Derrick, Center Brunswick, ... 3

NOTE.—The Committee recommended to the favorable consideration of the Executive Committee, two lots of sheep in the above class entered after the Committee had commenced their duties—one lot belonging to E Ottley, Phelps, Ontario Co., the other to John McDonald, Warren, Herkimer Co. They would have received Premiums, if entered in time.

LONG-WOOLED.

Best Buck, 2 years and upwards, John Bettridge, Riga, ... 10
2d do, do, G. H. & A D. Gazley, Pleasant Plains, ... 8
3d do, do, John McDonald, Warren, ... 5
Best Buck, under 2 years, Jurian Winne, Albany, ... 10
2d do, do, G. H. & A. D. Gazley, Pleasant Plains, ... 8
3d do, do, James Bettridge, Riga, ... 5
Best pen 5 Ewes, 2 years and upwards, V. H. Hallock Dover Plains, ... 10
2d do, do, G. H. & A. D. Gazley, Pleasant Plains, ... 8
3d do, do, John McDonald, Warren, ... 5

Best pen 5 Ewes, under 2 years, G. H. & A. D. Gazley, Pleasant Plains,........ 10
2d do, do, John McDonald, ... 8
3d do, do, Wood & Eastman, Woodville,........ 5
Best pen 3 Buck Lambs, G. H. & A. D. Gazley, ... 5
2d do, do, J. McDonald,........Morrell's Shep.
Best pen 3 Ewe Lambs, G. H. & A. D. Gazley,........ 5
2d do, do, G. H. & A. D. Gazley,........Morrell's Shep.

SPECIAL.

E. Ottley, Phelps. Special Premium, equal to 1st premium, $10, his Ewes having been overlooked by the Committee.

MIDDLE WOOLED—SOUTH-DOWNS.

Best Buck, 2 years and upwards, Samuel Thorne,........$10
Best Buck under 2 years, Samuel Thorne,........ 10
2d do Samuel Thorne,........ 8
Third do. Samuel Thorne, ... 5
2d Best pen 5 Ewes, 2 years and upwards, E. Corning, Jr., Albany,........ 8
3d do. John H. Booth, Bethlehem, ... 5
2d Best pen 3 Buck Lambs, E. G. Cook, Ellisburgh, Morrell's Shepherd.
Best pen 3 Ewe Lambs, John H. Booth, Bethlehem,........ 5

SHROPSHIRE DOWNS.

Best Ram, 2 years and upwards, Jacob Lorillard, New York,........$10
2d do., C. Parsons, Riga,........ 5
Best Pen 5 Ewes, 2 years and upwards, J. Lorillard, ... 10
2d do., C. Parsons,........ 8
2d do., 1 year old, C. Parsons,........ 8
2d do ; Pen 3 Ram Lambs, do., ...Morrill's Shepherd.
3d do., Pen 3 Ewe Lambs, do., ...Morrill's Shepherd.

MERINOES.

Best Buck 2 years and upwards, J. Stickney,........ 10
2d do. Potter Baker,........ 8
3d do. W. H. Armstrong,........ 5
Best Buck under 2 years, J. Stickney,........ 10
2d do. Potter Baker,........ 8
3d do. John M. Perey, ... 5
Best pen 5 Ewes, 2 years and upwards, Geo. Brown,........ 10
2d do. N. P. Brown,........ 8
3d do. J. Stickney,........ 5
Best pen 5 Ewes, under 2 years, Potter Baker, ... 10
2d do, George Brown,........ 8
3d do, John M. Perey, ... 5
Best pen 3 Buck Lambs, J. Stickney, ... 5
2d do, George Brown, ...Morrell's Shep.
Best Pen 3 Ewe Lambs, Geo. Brown,........ 5
2d do, W. M. Holmes, ...Morrell's Shep.
Best Samples of Wool not less than 5 fleeces, George Brown, ...Sil. Med.

SILESIAN MERINOES.

Best Buck. 2 years and upwards, Wm. Chamberlain Red Hook, ...$10
2d do., Wm. Chamberlain, Red Hook,........ 8
3d do., C. W. Hull, New Lebanon,........ 5
Best Buck under 2 yrs, W. Chamberlain, Red Hook,........ 10
2d do., George Brown, Oak's Corners,........ 8
3d do. Wm Chamberlain, Red Hook,........ 5
Best pen 5 Ewes under 2 yrs., W. Chamberlain,........ 10
Best pen 5 ewes, 2 yrs. and upwards, Wm. Chamberlain, ... 10
2d do. George Brown, Oak's Corners, ... 8
3d do. Wm. Chamberlain, Red Hook,........ 5
Best pen 3 Buck Lambs, W. Chamberlain,........ 5
Best pen 3 Ewe lambs, W. Chamberlain, ... 5

FRENCH MERINOS.

Discretionary to O. Howland, Auburn, ... $5

SAXONS.

Best Buck. 2 yrs. and upwards, T. V. Maxon, Adams,........$10
2d do. George Dakin, North East,........ 8
3d do. C. W. Hull, New Lebanon,........ 5
Best Buck. under 2 years, C. W. Hull, New Lebanon, 10
2d do. T. V. Maxon, Adams,........ 8
3d do. George Dakin, North East,........ 5
Best pen 5 Ewes, 2 years and upwards, C. W. Hull,........ 10
2d do. George Dakin, North East,........ 8
3d do. C. W. Hull, New Lebanon,........ 5
Best pen 5 Ewes, under 2 years, C. W. Hull,........ 10
2d do. George Dakin, North East,........ 8
3d do. C. W. Hull, New Lebanon,........ 5
Best pen 3 Buck Lambs, George Dakin, North East,........ 5
Best pen 3 Ewe Lambs, George Dakin, North East,........ 5
2d do George Dakin,........Morrell's Shep.

CROSS BREED, OF FINE WOOL—SAXONS AND MERINOES.

Best Buck, 2 years and upwards, E. G. Cook, Ellisburgh, ... 10
2d do, D. W. Curtis, Canaan, ... 8
3d do, O. Howland, Auburn,........ 5
Best Buck, under 2 years, O. Howland, ... 10
Best pen 5 Ewes, 2 years and upwards, Wm. Chamberlain, Red Hook, ... 10
2d do, D. W. Curtis, Canaan, ... 8
3d do, O. Howland, Auburn,........ 5
Best pen 5 Ewes, under 2 years, E G. Cook, Ellisburgh,........ 10
Best pen 3 Buck Lambs, Geo. Brown, Oak's Corners, 5
2d do, Wm. Chamberlain. ....Morrell's Shep.
Best pen 3 Ewe Lambs, W. M. Holmes, Greenwich. . 5
2d do. C. W. Hull, New Lebanon,........Morrell's Shep
Best Samples of Wool, not less than 5 fleeces, Wm M. Holmes, Greenwich,........Sil. Med.

CROSS BREED, OF COARSE OR MIDDLE WOOL.

Best Buck, 2 years and upwards, John McDonald, Warren, ...$10
2d do. Zerah Rider, Coila,........ 8
3d do. Samuel A. Curtis, Canaan,........ 5
Best Buck, under 2 yrs., H. Bowen, Jr., Medina,........ 10
2d do. Robert Brodie, Smithville,........ 8
Best pen 5 Ewes, 2 years and upwards, H. Bowen, Jr, 10
2d do. John McDonald, Warren,........ 8
3d do. Zerah Rider, Coila,........ 5
Best pen 5 Ewes, under 2 years, H. Bowen, Jr.,........ 10
2d do. John McDonald, Warren,........ 8
3d do. Samuel A. Curtis, Canaan,........ 5
Best pen 3 Buck Lambs, Austin Eastman, Belleville,. 5
2d do. Robert Brodie, Smithville,........Morrell's Shep.
Best pen 3 Ewe Lambs, John McDonald, Warren,........ 5
2d do. H. Bowen, Jr., Medina........Morrell's Shep.
Best Shepherd's Dog, Jacob Lorillard, New-York,........ 5

FROM OUT THE STATE.

Long Wooled—Best Buck, John Snell, Edmonton, C. W.,........$10
Best pen 5 Ewes, G. C. Hitchcock, Ashgrove, near Preston, Conn.,........ 10
Middle Wooled—Best buck, J. C. Taylor, Holmdel, N. J , 10
Merinoes—Best Buck, Jesse Hines, Brandon, Vt ,........ 10

SWINE—LARGE BREED.

Best Boar, 2 yrs. old and upwards, E. Wait, Walden,.$10
2d do do S. D Hungerford, Adams, ... 5
Best Boar, 1 year old, E. Griffin, Clinton Corners,........ 10
2d do do Wm. Richardson, Albany,........ 5
Best Boar, 6 months and under one year, Clark & Gillett, Smithville, ... 8
Best Breeding Sow, 2 years old and upwards, S. D. Hungerford, Adams, ... 10
2d do do Wm. Richardson, Albany,........ 5
Best Breeding Sow, 1 year old, A. M Underhill, Clinton Corners........ 10
Best lot of Pigs, not less than 5, under 10 months, Jas. F. Converse, Woodville,........ 8
2d do do Converse & Brodie, Woodville,........ 4

SMALL BREED.

Best Boar, 2 years old and upwards, A. M. Underhill, Clinton Corners,........$10
Best Boar, 1 year old, J H. Booth, Bethlehem,........ 10
2d do do Jas. L Mitchell, Albany,........ 5
Best Boar, 6 months and under 1 year, Sam'l Thorne, Thornedale, ... 8
2d do do Wood & Eastman, Woodville,........ 4
Best Breeding Sow, 2 years old and upwards, Erastus Corning. Jr., Albany,........ 10
2d do do James L. Mitchell, Albany,........ 5
Best Breeding Sow, 1 year old. C. Rapp, Jr., Albany,.$10
Best Sow, 6 months and under one year, Wood & Eastman........ 8
2d do, Samuel Thorne, ... 4

MACHINERY.

Best Grain Drill, with apparatus for Distributing Grain, Seed, and Manure, John C. Stevens, Lee, Mass.,..S. M.
Best Improved Tile or other invention for securing the run of Water in Drains, F. M. Mattiee, Buffalo, ... $5
Best Horse Power, (lever principle,) Dow & Fowler, Fowlersville,........ 8
2d do. G. Westinghouse & Co., Schenectady, ... 3
Best Horse Power (Endless Railway,) joint award to Wheeler, Meliek & Co., and Emery Brothers, Albany, as equal in merit,........ 8
Best Clod Crusher and Roller, combined, Herald & Tompkins, Trumansburgh 5
2d do, Anson Thompson, Glen's Falls........ 3
Emery Bros., Albany, Cotton Gin for Horse Power.Dip.
Do. do, Horse Power Governor.........S. M.
Best Thrasher, with Cleaner and Separator, Dow & Fowler, ... 5
Best 2 horse Cultivator, Sayer & Remington, Ilion........ 5
Best Corn Stalk and Hay Cutter (Cummings' Patent) Emery Brothers, Albany........ 5
Allen Sherwood, Auburn, for Combined Reaper and Binder, and Binder separate.........Dip.
Best arrangement for unloading hay, by horse or steam power, C. E. Gladding, Troy, Pa 3
2d do, Herald & Tompkins, Trumansburg........ 3
Best Portable Saw Mill, Pease & Eggleston,........ 8
Best Potato Digger, J. B. Parvin, Hightstown, N. J.. 3

Evening Discussions at N. Y. State Fair.

Culture of Grasses.

A large number of farmers met in the lecture room of Agricultural Hall, in this city, on Tuesday evening, the 4th inst, and were called to order by T. C. PETERS, Esq, of Genesee, after which Judge RODGERS, of Lewis Co, took the Chair as President of the evening.

Mr PETERS said that it was proposed to bring up the subject of Grasses for discussion, and spoke of the importance of the grass crop to the farmers of New York, and of the reliance placed upon it as a staple crop in all parts of the state. The crop this year, he thought would be far below the average, and in dairy districts he was convinced that three-fourths of the cows could not be wintered, owing to a light crop of grass.

Mr. J. STANTON GOULD, of Columbia Co., had given the study of grasses considerable attention, and made a lengthy statement in regard to their culture, based upon statistical returns. He thought our meadows produced more ten years ago than at the present day, and attributed their deterioration to the prevailing ignorance, in a great measure, among farmers in regard to the nature, uses and chemical relative value of the various species of grass. When so much depends upon this, it is surprising that no more careful attention is given to it. Animals he considered but machines for the farmer's use, and by means of which he could turn the products of his meadows and pastures into cash. He stated the annual value of the grass crop in this State to be $60,000,000; in the New England States $68 000,000, and in the United States over $300,000,000! These figures show the value and importance of the crop. It should be the object of all farmers to become fully acquainted with the nature of the various grasses, before laying down their lands. Mr. GOULD said that 100 lbs. of timothy was equal in nutritive qualities to 300 lbs. of the sweet scented vernal grass, and this latter kind it was which gives the peculiar beautiful and delicate smell to our hay-fields. Some grasses which contain a large amount of carbon and hydrogen, go to make up the fat of an animal; others, composed largely of nitrogen, form muscles; while another variety goes to give warmth to the body in the form of hair. He thought that pure chemistry was not reliable in giving information in regard to the value of grasses, and would suggest to the farmers that the trial be made at their own mangers; first, by weighing an animal when put up to one kind of grass for feed, and also by weighing the hay given, and then changing to other kinds of grasses and noting the result. In seeding down meadows he thought it should be a rule to seed down with a great variety of seeds, as it was well known that large numbers would die, and that only a certain number of seeds would grow in a given area. It had also been demonstrated that only two seeds of blue grass would grow upon a square inch of ground; but by sowing in this space timothy, and also by multiplying the kinds the whole ground would be filled up, and five or six different varieties grown upon a square inch. He would also recommend to sow such seeds as come into flower at the same time. In regard to the average product per acre, he thought it was greater in the southern than in the northern part of the State.

In regard to the state of land for the grass seed, he thought it would pay extremely well to obtain as fine a tilth as possible, and cover the seed but lightly. One-eighth of an inch was a sufficient depth, while grass seed would fail to germinate if covered to a depth of one inch The practice of harrowing in grass seed he considered destructive to the crop, but if it must be harrowed, it should be done very lightly. If possible grass seed should be sown just before a rain, and leave that to make the necessary covering. Lime as an application to land, would be improved in value if slacked in water considerably salt. In conclusion, Mr. GOULD referred to draining and irrigation, as the best and most practical means for the improvement of meadows, and referred to the facts that 6,000 feet of the water of the Rhone, which was carried away in sewers, contained enough value to produce an ox; and that by this means of irrigation the meadows of Edinboro' had been made to produce 25 tons of hay per acre.

Mr. PETERS spoke of the lands of Long Island, commonly known as the "barrens," and thought there was no better land on the continent than that in the vicinity of Hempstead. He thought one great advantage of that locality, was owing to the fact of the atmosphere and the heavy dews, as in most seasons of the year the dews are so heavy as to drop from the eaves of the houses.

Ex-President McCOUN, from Queens Co., was called upon to give a statement of the general system of farming in that county. He stated that they first plowed up a pasture or grass field for a crop of corn, manuring it before it was plowed, with a good coating of stable manure. It was seldom that manure was applied in the hill. Corn would no doubt obtain a *quicker* growth thus manured, but would not fill out so heavily. After the corn is harvested the land lies until spring, when it is again plowed and sowed with oats; sometimes, however, potatoes were substituted for oats in this case. When this crop is taken off in the fall it is again plowed for wheat, manure being applied before the operation. The land is rolled both before and after being sowed. Grass seed is sown after the last harrowing. Eight quarts of timothy seed is used per acre, and fields remain in grass for a number of years. Do not pasture meadows in the fall. Sometimes a top dressing of guano of 150 lbs. per acre is applied with good results. The soil is a sandy loam. He thought the average of hay to be two tons per acre.

Mr. MARKS, of Onondaga Co, attributed the light hay crop the present season to the early frosts and the general severe drouth in May.

Mr. GEDDES said that more was produced in Onondaga county now, than at any former period, and the farmers were employing more skill in the cultivation of their farms. He stated that one-half of the land in the county never had an application of barn-yard manure, but was kept up solely by plaster and clover as a dressing. Their new meadows had produced well while the older ones had not. In sowing wheat he always left the ground as rough as possible, never applying a roller. Six quarts of grass seed, timothy, was used in the fall with wheat, and eight of clover in the spring.

Mr. LYON, of Lewis Co., thought the best time to cut timothy was when it was in the second blossom, before the seed had matured. Clover he would have cured in the cock, and cut when the dew was falling at night, at a period before the blossoms get dry, and when two-thirds of the flowers are ripe.

Mr. CLARKE thought the deterioration of our meadows was caused more by late mowing, and then having dry hot weather in the fall before the roots have time to get strengthened. If possible he would have all his hay cut and harvested from the 5th to the 20th of July. Canada thistles if allowed to go to seed, he was satisfied, would die out in five years.

Col. BREWER, of Tompkins Co, considered 75 lbs, of hay cut green, worth more than 100 lbs. cut when ripe. At all events grass should be cut before it has dropped its seed. He thought a ton of hay, cut when dead ripe, would not form a single pound of new flesh. Clover he had cured well by putting it in the mow with layers of straw, and considered it the very best hay for horses, sheep and milch cows. He had grown wheat on the same land seven years out of fourteen;

Tompkins county is fourteen hundred feet above tide water; he used one peck of clover seed per acre, put on the land about the first of April; he had renovated an old meadow by early cutting, not pasturing it in the fall.

One speaker stated that he had proved that timothy, if cut below the first joint, would die out.

It was considered that clover seed would do well if sown in the fall, if the winter was one in which a large body of snow laid upon the ground, and no frost occurred.

WEDNESDAY EVENING, October 5th.

Manures—Best Kinds—Best Modes of Application.

Attendance large—Hon. ZADOCK PRATT, took the Chair

Perhaps no subject could be presented to the farmers of this or any other State, which would bring out so many and such diverse opinions as the one for discussion this evening. In the following abstract of the evening's talk, we have endeavored to give the more important facts stated by the speakers, not reporting that talk which enlivened the discussion, but added nothing to our stock of practical knowledge upon the theme.

W. PLUMMER, Onondaga.—I dress my land with gypsum and clover, and find it does well; you may call it manure or not manure, as you please. I turn under clover and use it as a fodder. For thirty years this has been my course, and my land produces better now than ever before. In putting manure on to my land, I use from 20 to 25 wagon loads per acre; I think it best to plow the manure under; my rotation is, 1, corn, 2, barley, 3, wheat, and 4, grass, letting it remain in grass three or four years.

C WINEGAR, Cayuga Co.—Make all the manure you can, use carefully all you make; plow under as soon as it is put upon the ground, and the quicker it is got into the ground after being made the better.

Mr. MOSELEY, Onondaga.—I employ the winter in spreading my manure upon the snow. This I think incorporates it with the soil, and the soakings from the manure go down into the land. I had a hard clayey knoll which was thus covered in winter, and the treatment rendered it soft and mellow. This method of application does not cut up the land, and there is more leisure in winter for the operation.

T. C. PETERS, Genesee.—I plow shallow, that is, I do not plow 8 or 9 inches deep. I have found that shallow plowing on light land does well for the first time, but at the second plowing I would go down deeper, completely loosening the sub-soil, but not turning it up. This furnishes a foundation for thorough and deep cultivation, going down by degrees. I have found where long manure has been plowed under in the spring, that straw so covered, has been found in almost a perfect state, after having laid there until plowing was again done in the fall. Manure should be applied near the surface, which I think will produce the best results.

LEWIS F. ALLEN of Black Rock, Erie Co., made some interesting remarks, in which he stated that any one rule would not apply to all soils, seasons and climates, in the application of manures. His was a grass farm of a clay loam, and the application of dressing was applied on the surface in August and September. He thought well of keeping sheep on land and having the application of manure made in that way. In some further remarks, Mr. ALLEN gave an account of a visit to the farm of Mr. Patterson in Maryland, who 20 years ago, took the farm he now occupies, which had been sadly reduced by growing large quantities of corn and tobacco, so that it was not worth five dollars per acre. His first operation was to engage in burning lime which he put upon the land, covering it so that it resembled a fall of snow; he then harrowed and sowed grass seed. The land was not plowed, and now produces nearly three tons per acre of good hay. Mr Patterson always manures upon the surface.

Mr. LYON, Lewis Co.—Farm a sandy loam, and what would be called a "hungry soil." I plow in my manure as soon as it can be got from the barn, and plow from six to seven inches deep. Some of my land has been in grass from 10 to 15 years, and now produces well. I usually plow up once in six years.

CALEB WINEGAR, Cayuga Co.—Nature, it is true, puts her manure near the surface, and some people tell us to follow nature in this respect; but she does not do all, for she does not plow. If I had plenty of manure I would plow it in; if not, I would have it near the surface.

Mr. GOLDMAN, Orange Co., made some remarks in regard to the difference of soils and the different manure to be applied to them He had found that where manure was plowed under it retained its virtue in the soil for several years.

Mr. COLLINS, Lewis Co., had upon his farm, land which had been in grass for fifty years, and was not plowed for that length of time. He now cut from it 3½ tons of hay per acre, and had always manured it upon the surface.

Mr. E. MARKS, of Onondaga, occupied a dry rolling farm upon the Onondaga shales. He had formerly plowed in the manure, and had often failed. He then changed his course, and now applies upon the surface for grass lands, in September or October, and is sure to find the effects of the dressing in whatever way the land is used after the application.

Mr. SYLVESTER, Wayne Co, always plows the manure under, that the ammonia may be retained for the use of the plant. A portion of his land in 1857, produced only five bushels of wheat per acre, and by manuring with stable manure and plaster, now raised over 80 bushels of shelled corn the acre. He had also practiced subsoiling to some extent, [which Mr GEDDES and others thought was the means of the increased fertility of his land.]

GEORGE GEDDES stated that JOHN JOHNSTON was the first man to come out in print and say boldly that manure should be applied upon the surface, although many farmers practiced it before that. He thought it should be an object with farmers to make their grass grow and fill the land with roots, and then turn under this for manure. As for wheat, he thought it would winter better if drilled in. He made a lengthy series of remarks, in which he paid a high tribute to the teachings of Mr. JOHN JOHNSTON, saying that he thought more of him than of LIEBIG.

Mr. PLAISTED, of Kingston, Ulster Co.—Land does not leach manure. Take a barrel of sand and pour liquid manure into it, and the water will come through clear. My farm is a sandy loam; I plow from 6 to 9 inches deep, and when seeding to grass use half a bushel of Timothy seed to the acre, and cut four tons of hay from the same ground. Land must be *worked* more; poor or rich, manure or not, be sure to work the soil.

A. L. FISH, of Herkimer Co., has a dairy farm; of a dry soil, and keeps from 25 to 60 cows. Twenty years ago the land was so poor that no grass could be seen. He plowed and planted corn, manuring with artificial manure. Fed the corn to cows, and saved the solid and liquid excrements, which he spread broadcast and plowed under. When seeding he used a peck of Timothy and four quarts of clover, with some red-top. As the clover died out, the Timothy came on to take the place. In the space of 20 years he had thus increased the productiveness of his land four-fold. He thought there was an error in applying manure in a coarse state; as, if fine, the crops can best make use of it.

SOLON ROBINSON, of the Tribune, asked how the farmer was to *begin* to manure and increase the productiveness of his farm. This was an important question, and had not been stated by any one present. He would thank some one for the information.

Hon Mr. **Pratt**.—In the Catskill region, where I reside, we make use of tan-bark and forest leaves. These are put into the hog pen and barn-yard. In two months 50 cows will make a very large quantity of compost; this is plowed under in the spring, and with a top-dressing of composted hen manure, corn was planted. On four acres of corn, he had applied 100 bushels of hen manure.

T C **Peters** stated the following facts in regard to a Dutch family of five, who had nothing at all to begin with but a small piece of land. A large tub was procured in which all the slops were saved. This was applied to land, spaded up and planted to cabbages, probably about one-quarter of an acre. Next they obtained a cow; with this, came greater means, and they were used; compost was made, and now (in the space of a few years) the one-fourth acre is fifty acres, well cultivated Does this show how to *begin?*

Hon A. B **Conger**, President of the State Ag. Society, made some very able remarks, in which he stated that he had hoped to gather from the evening's discussion a principle of philosophy which should govern the actions of the farmers of New-York in the application of manure to their land; but he did not rise for the purpose of entering the discussion, but to introduce to the farmers of the Empire State the Hon. **Josiah Quincy**, Jr., of Massachusetts.

Mr. **Quincy** was received with applause and spoke in substance, as follows:

I do not speak, thinking to instruct the farmers of New York. Fifty years ago my farm cut 20 tons of hay; it now cuts 300 tons. [Cheers.] This is due to the soiling system which consists in keeping cattle in stables. It makes a great saving of land where it is valuable—it makes a saving of fencing—it economises the food—the animals are kept in better condition and have greater comfort—a large amount of milk is produced and all the manure is saved. These are the benefits and advantages of the soiling system. Every inch of my land is under cultivation, and there are no waste spots. In regard to keeping cows, the manure of a cow is of equal value with her milk; one cow will produce in a year 3½ cords of solid and the same of liquid manure; this composted with twice its amount of muck, would increase the amount to 21 cords of manure a year from one cow, the value of which, allowing the shrinkage to be 12 per cent, would amount to 150 dollars. The farms of France are all less than 5 acres each in size, and our farmers do not yet know how much can be produced upon small farms by good cultivation, with the application of the system of soiling. [Cheers]

How to Make Good Cider.

An old cider-maker gives in the *Rural New-Yorker*, some very sensible directions on this subject, from which we condense the following: Gather the apples, clean and dry, when ripe; grind them fine, (about 100 bushels at a time;) let the pomace remain in the vat from 24 to 48 hours, according to the season, until fermentation commences, producing little bubbles on the surface; then express moderately, or rather let it drain out. Use dry, clean straw to lay up the pomace; after the first run, the cider will be clear, high colored, rich and mellow in taste. * * A full barrel of cider, as it runs from the press, will *shake down* from two to four quarts—this should be well done by shaking and rapping the heads—then again filled to the full, bunged tight and placed in a cold cellar, and allowed to work or ferment through a spile or gimlet hole, (the froth working over.) Towards the last put in the spile gently, and raise it daily to let the wind puff out, putting it in quickly to keep the common air from it—continuing this as long as it requires vent. After this, keep the cask tight, and all is done *but the drinking of good cider*, never hard or sour—there is nothing to make it work and become so.

"Unfavorable Seasons."—Cold, Wet Springs.

Contingencies of the Season, Frosts, Drouths, and Floods; some provision possible against their effects—"The Cold, Wet Spring"—Character of Soils Earliest Fitted for Tillage—Drainage gives Heavy Soils a Like Character, and thus "Lengthens the Season"—Manure and Good Culture hasten the Growth and Increase the Product of our Crops.

In speaking some months since, (Co. Gent., March 10, '59,) of the difficulties and discouragements encountered by the farmer, we remarked of the losses resulting from the changes and contingencies of the weather—from frosts and backward springs—from drouths and floods—hinting that it was, to some extent, in the power of the cultivator of the soil to turn aside or provide against these causes of loss and failure. We now recur to the subject to present more in detail some thoughts, which we trust will commend themselves to the attention of our farming readers.

1. The "unfavorable season" often commences with *a cold, wet spring*, retarding the growth of grass and winter grains, hindering the culture of the soil, and delaying the sowing and planting of spring crops, as well as their early growth after commitment to the soil What can be done in a case like this? Let us see. Does not Nature herself hint a remedy? Some soils are fit to work earlier than others—the frost leaving the same, and the ground becoming settled and comparatively dry very soon thereafter—these invariably are well-drained, friable soils, passing off the surplus water by filtration instead of evaporation. We may give this character to all our land by providing for their proper drainage, thus "lengthening the season" of labor and vegetation for several weeks, as remarked upon recently in this journal, (Co. Gent., Oct. 6, '59.) Then the work can be commenced much sooner, and be done in a much better manner, and the very soil itself is as much warmer as though situated one hundred miles southward. But the article referred to contains all that is now necessary on this point.

Drainage is one provision against the evils of a wet, backward spring; plenty of manure thoroughly mixed with the soil, is another safeguard against loss. It gives the crop a supply of food near at hand, at the time when it is best able to forage for itself—not having the amount and length of root requisite for reaching more distant supplies. An early and vigorous growth is important to every product, not only to hasten the maturity, but to enable it to withstand the various evils with which it must contend ere it is perfected.

Fall plowing, on some lands and for some crops, will allow the farmer to take advantage of the earliest possible moment for getting his seed into the soil, and thus provide another remedy against the evils of a cold, wet spring. Indeed, there are various methods of forwarding the work of the farm, among which we may mention, teams in good condition, implements always in repair, and of the best kind for our purposes, autumn plowing and manuring, and last, though far from least, a plan and a system wisely contrived and thoroughly carried out, so that nothing shall be left at loose ends, and neither time or material be allowed to waste. As we have before remarked, a clear head and a sagacious foresight may find ample exercise in carrying on the simple operations of the farm, and they are needed, and we believe rewarded, as well in the profession of agriculture as in most other pursuits.

We shall hereafter take up another characteristic of our climate—the summer drouth—and offer some thoughts on the best means of guarding against the evils of the same.

Steam Plows at Chicago.

Chicago, Sept. 17, 1859.

Eds. Co. Gent.—The interest of the Exhibition was greatly increased yesterday, by a trial of Fawkes' Steam Plow and of Water's Detroit Plow.

A committee of the Society, consisting of Mr. Dickie of Michigan, Mr. Johnson and Mr. H. L. Olcott of New-York, and one other whose name I do not recall, and the committee of the Illinois Central Railroad, took charge of the trial. After passing the engines twice around the track on the grounds, the committee riding on the Fawkes machine to test their feasibility as locomotives on the road on land—gave them a trial as plowing machines. Fawkes' has eight plows, and Waters' twelve. Waters' plows were tried in the show grounds, and cut its furrows 6 inches deep on an average, and the whole 19 feet wide—and the work was well done. Probably some arrangement must be made with the plows to this machine, so that it may be gauged at the will of the operator; as it now is, I think it must cut as it goes, at such depths as the inequalities of the soil may require; some of the furrows were *five* inches in some places, and in others where there were inequalities, from *seven* to *nine* inches.

The machines were taken out of the grounds upon the prairie, and an acre, or about that, assigned to each. Fawkes' plow performed its work on 1 93-100 acres, cutting eight furrows—about 10 feet in width in the whole. The time employed, was, I learn, 35¼ minutes. The particulars of the whole operation will be given by the committee in their report. The trial upon the whole was very satisfactory—so far so, I think, to the committee of the Illinois Central Railroad, that they will pay Mr. Fawkes's the $1,500 offered by them, and will introduce his machines along the line of their road.

Mr. Waters' plow unfortunately broke down on the prairie trial, much to the regret of all. My own opinion is that he will succeed—but as his machine was for the first time publicly tried here, being but lately finished, defects were expected which a series of trials alone will correct.

Enough, however, has been decided by the trial of Fawkes' plow—before the Illinois State Agricultural Society and here, to show that the work by the Steam Plow can be much more cheaply done than by the common breaking plow here in use. The committee of engineers made a report on the trial at Freeport, recommending to the Society to award the premium of $2000, which, for reasons not yet given, so far as I know, the Executive Committee did not assent to. The committee give a detailed statement of the expense of Fawkes' Plow per diem, making the actual expense, including interest on the cost of machine, &c., to be $16 12 per diem for plowing 25 acres per day. The cost of breaking up here by ordinary plows, is $2.50 per acre, making $62.50 for the same quantity of land—the Fawkes' Plow breaking up at an expense of 62½ cents per acre.

Whatever defects may now exist, and it is evident there are several, which when remedied will reduce even this amount, it is apparent that where lands like the prairies, free from obstructions, are to be found, there the Steam Plow will soon be witnessed superseding the ordinary team-work.

A machine from Chicago on the ground, costing $600, for pulverizing stubble on cultivated land, I think promises well. Its operation by cutters pulverizes the soil to any desired depth, and I do not see why the inventor may not attach plows to break up, by increasing perhaps, the power of the machine. He says he can easily do it, but his object was to furnish a machine that could be used after the sod is removed. Not having an opportunity of seeing it in operation, I cannot, of course, judge as to its practical merits, but it is certain *this* is what is specially needed—a substitute for the plow, that will *pulverize* the soil thoroughly and save the expense of the thorough work now required to break in pieces the furrows of the common plow.

Another machine on the ground, from New York I believe, which is constructed for spade culture, I regret escaped the notice of the committee until this morning, and had not been tried, but I hope may be during the day. The inventor has great confidence that he has the plan to do the work. He expects to be at the New-York State Fair, and if he is I trust the officers will give it a thorough trial.

The receipts of yesterday are said to have been over $5,000, and it is hoped that the Society will leave Chicago with its treasury sufficiently replenished to enable it to go forward without pecuniary embarrassment.

Vermont State Fair.

The ninth annual fair of the Vermont State Agricultural Society, closed on the 16th inst., having continued four days. The beautiful grounds of the society at Burlington, where the fair has been held three times, improve from year to year in the completeness of arrangements and general convenience of the accommodations afforded to exhibitiors.

The display of horses, which is the most prominent feature of the Vermont fairs, was this year uncommonly fine. Many horses of celebrity from our own state and from Canada, were on the ground, and added not a little to the attractions of the horse show. Ethan Allen, Plato, Columbus Jr and other noted horses, were present in most excellent condition. The display of breeding mares and colts was good, but not large.

There was a marked and decided improvement in the number of entries in classes of other stock than horses, and in the quality of the stock exhibited. The attention of Vermont farmers is going in the right direction, and with hopeful energy, in the matter of cattle, as the very creditable display of Devons, Durhams, and Herefords, full-blooded and grades, at Burlington proves. We noticed the fine Durham bull "May Duke," from the herd of George Vail, Esq., of Troy, on the ground for exhibition.

Among the sheep, Spanish Merinoes, Cotswolds, and South Downs, were the most numerously represented, and very fine specimens of each breed were abundant

Thursday was the great day of the fair. Governor Banks, of Mass , delivered a most happy and instructive address, on the history and influence of Industrial Exhibitions. Rapidly sketching the history of fairs or expositions, he opened to view their grand influence in the progress of the race, and urged their multiplication in number, and their continual widening in the character of their *material*.

On the stand with Gov. Banks, were seated Major-General Wool, Hon. Geo. Vail, Hon. J R Giddings, Ex-Gov. Fletcher, Hon. L. Brainerd, in addition to the officers of the society.

The crowd, there being some 20,000 persons on the ground on Thursday, was remarkably quiet and orderly.

On the whole the fair was most encouraging, as an earnest of what the Vermonters are doing in all departments of agriculture.

John Johnston and his Farming.

Messrs. Editors—And so your friend and valued correspondent, John Johnston, has sold the greater part of his finely improved and highly cultivated farm—has abandoned the field where the enthusiasm and restless activity of his nature has found full scope for exercise for so many long years, and where he seems to have enjoyed himself immensely in originating, carrying out, and reaping the fruits of those extensive improvements of which the readers of your papers have been so well posted from time to time. I have carefully read all of his communications that have come under my eye for many years, and on the whole consider them calculated to do more good than anything of the kind that I have met with in the course of my reading—in his case *theory* and *practice* seem to have perfectly harmonized, and while he has been reaping golden harvests at home, he has been urging his brother farmers to follow on and reap the fruits of his experience in their own fields and homes. Of course, his farming is a success, although I will say here that any man who was possessed thirty-five years ago of three hundred acres of good land in Central or Western New-York, and has managed to keep it until now, even if he has no more than made the two ends of the year meet, and has comfortable improvements, is in the possession of what can be converted into a handsome fortune, and has succeeded far better probably than nine-tenths of the men who have been engaged in the mercantile business during the same time. The rise of real estate has made many a man rich who would otherwise be poor—indeed I believe this remark will apply to the majority of the farmers of the country Such men as Mr. Johnston succeed anywhere and everywhere. There is no portion of our country so poor but that they "can make it go." If he had come to the broad prairies of the west, he would now count his acres by the thousand—his cattle, his sheep, his hogs, his grain, and his dollars too, would all be counted by the thousands, just as hundreds of men of his stamp are doing now, and their number is increasing too. Farming is like every other business; it all depends upon the man. Mr. Johnston's experience and success in thorough drainage and high manuring is particularly valuable to the farmers of older States; while the thoroughness that characterizes all his work commends itself to the whole country. No man can calculate the loss arising from the loose slipshod way of farming that is so prevalent at present.

There is one feature in his system, which is a very prominent one, and a main element in success, which, judging from the inquiries in your paper, is a source of much trouble to many readers—I allude to his buying stock and such large quantities of grain and oil meal to fatten it with. Now here is where the shrewdness "sticks out" most conspicuously, and where he gains an immense advantage over his more dull and less fortunate brethern. There is "a trick" in buying stock which but few possess, and must be absolutely essential where grain and feed bears so high a price as in Western New-York, unless a very high return can be depended on from the manures. His system is very far from being strictly self-supporting, being largely indebted to commercial shrewdness for its success, and those who would adopt it will do well to follow his advice—commence on a small scale and feel the way cautiously.

No one man can be a safe pattern for every other man to follow. Very few farms can be found requiring precisely the same course of management in detail; although agreeing in some points, yet they differ widely in others.

In arousing a spirit of inquiry, and leading men to think, all over the country, lies the great benefit which Mr J. has conferred upon his brother farmers, and for which he deserves their lasting gratitude. Very few can follow directly in his footsteps, but many will be led to look about them, and out of the materials within their reach, and the peculiar surroundings belonging to each individual case, begin a course of improvement that shall result in lasting good to themselves and to their children after them. Farmers must *think*, *plan*, *contrive*, *read*, and cherish a *pride in their profession*, before we can expect to see any very great advancement in agriculture. Whenever the American farmer shall take the pride in his profession characteristic of the British land-holder, then may we expect to see a noble race for distinction, but as long as it is regarded as but the stepping stone to some political or other trifling distinction, or as the present shift for making a living, nothing will be done.

I sincerely hope that Mr. J. may yet live for many years, to aid by his counsel and advice many who are commencing in the work of improvement, and who are now largely indebted to him for the impulses that have started them. Hawk-Eye. *Keokuk, Iowa.*

Recipes for Lemon Pies.

Having noticed in Co. Gent., September 1st, recipes for Lemon Pie, numbers 1 and 2, I send numbers 3 and 4 by request of Mrs. D.

Lemon Pie, No. 3.

One large, fresh lemon, grated fine—the pulp rinsed in half a tumbler of water—yolks of 4 eggs, beaten thoroughly—6 tablespoonfulls of sugar—1 tablespoonfull of flour, stirred with the egg—2 tablespoonfulls melted butter, all well beaten together—one crust. Bake until done. Then take the whites of 4 eggs, with three tablespoonfulls of sugar, well beaten—spread smoothly on pie—return to the oven until slightly browned.

Lemon Pie, No. 4.

One lemon, one teacup of sugar, one teacup of sweet cream well stirred. Bake with two crusts. Please try them. Mrs. C. S. D. *Clifton Springs.*

Cabbages for Milch Cows.

The *N. E. Farmer* recommends its readers to raise larger quantities of cabbages than they have before done, and make use of them as a feed for milch cows, to be given them late in the fall, when the grass is becoming dry and scant. He states that upon a small plot of ground adjoining the farm-yard, 700 head of the Flat Dutch cabbage have been raised, being planted four feet apart in the latter part of July. The average weight per head was twenty pounds, and one of them given to a milch cow at night would afford a good supper and keep up the milk remarkably.

Churning Milk for Butter.

The discussion on dairy farming, at the Syracuse State Fair brought out the agreement of the most experienced dairymen in the opinion that the butter was better, and could be longer preserved by churning the milk and cream together, than by churning the latter alone. When too distant from cities to allow of selling milk, butter making was considered the best product—more profitable than cheese.

No. XX.—The Parasitic Destroyer of the Curculio.

I am inclined to rank the Plum weevil or Curculio (*Conotrachelas Nenuphar*) as the most important and worst injurious insect which we have in our country. Although the Wheat midge is at the present period causing a much greater amount of pecuniary loss than this insect, I cannot but think its career will be analagous to that of its predecessor, the Hessian fly, and that it will therefore in time become so fully naturalized and mastered by its parasitic destroyers, that it will cease to be the formidable evil which it now is. Unlike it, the Curculio is a native insect of our country, which has now been known upwards of a century, during all of which time it appears to have gradually multiplied and increased its forces without any cessation or intervals in its ravages. At first, in the correspondence between the botanists Collinson and Bartram, A. D 1746, it is spoken of as totally destroying the nectarines, whilst the plums were but slightly molested by it But after a time it took the plums also. In my boyhood, the wild plum trees in my own vicinity were often well filled with fruit. But though many of these trees are still standing, and thrifty and young trees have also grown up, I have never since that time seen a ripened plum upon any of them. And now a large portion also of our cherries and apples are every year destroyed by this same insect.

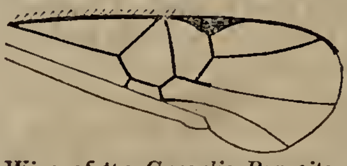
Every reader is doubtless aware that the increase of most of our injurious insects is repressed by other insects, which attack and destroy them—every species probably having one or more of these destroyers, which are its most inveterate foes. Hitherto, however, no insect of this kind has been discovered as living at the expense of the Curculio. But we now have such an insect brought to our notice.

D. W. Beadle of Saint Catharines, Canada West, sends to the Country Gentleman several specimens of two insects, which he bred from the black knots of the plum tree, one a Curculio, the other a fly, which he suspects may be a gall-fly, (to which indeed it has a close resemblance,) and if so, as he observes, it may throw important light upon that mooted subject, the cause of these black knot excrescences, as it is the habit of these flies to produce by their stings those singular balls and other swellings which we see on oaks and other trees and herbs. He desires information as to the name and true character of this fly. The specimens, placed in small vials of spirits, came to hand in an excellent condition for a satisfactory examination, and for future preservation in my cabinet. Their history is related by Mr. Beadle, as follows:

"Early in June, I put some black knots, cut from the plum trees when they were quite green, into a glass jar half filled with clean moist sand, and tied a piece of thin muslin over the top. The Curculio beetles began to make their appearance in this jar early in July, and the flies about a fortnight later, and specimens of each kind have since been occasionally coming out up to this time, August 12th. The larvæ of the Curculio went from the knots into the sand, and there passed their pupa state, but I did not detect the flies until they assumed their present form."

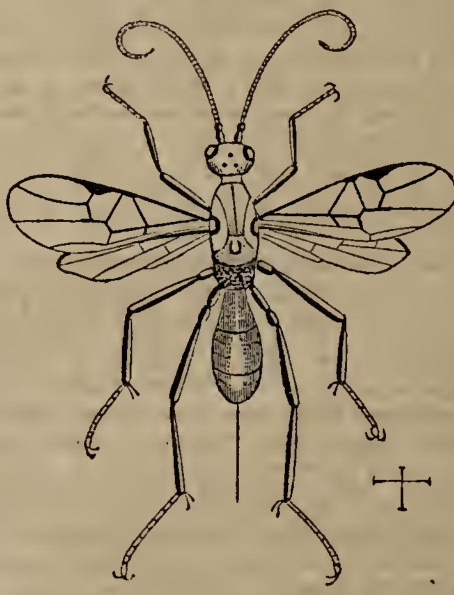
These flies are a species which has never yet been described, at least by any author with which I am acquainted. To place this insect suitably upon record therefore, and in such a manner that persons who are not professed entomologists will be able to trace it out and identify it, should they chance to meet with it around fruit stung by the curculio, some details will be necessary, which to the general reader will be prosy and uninteresting. Such readers are therefore at liberty to skip over what follows, until they come to the two closing paragraphs of this article.

The internal parasites, as they are termed, constitute much the largest and most important portion of those insects which are destructive to other insects. These are mostly four-winged flies pertaining to the order Hymenoptera, and resemble bees and wasps, though they are unable to pierce the human skin with their stings, and can therefore be handled with impunity. They form four very extensive families, named *Ichneumon, Bracon, Chalcis and Proctotrupes.* The insects of these families may easily be distinguished from each other as follows: The Ichneumon flies are mostly larger sized than the others, with their fore wings more traversed by veins. The Bracon flies are smaller and with fewer veins in their wings. The annexed cut represents a wing of the fly sent us from Mr. Beadle, much enlarged. Here three veins are seen running lengthwise in the hind part of the wing. In the Ichneumon flies there is always a veinlet or cross vein running from the inner to the middle one of these veines, in addition to that at their anterior ends, and which is seen angularly bent in its middle in the figure In the Bracon flies there is no cross vein connecting these longitudinal ones, except that at their anterior ends. By this mark these two families may always be distinguished. The two remaining families comprise very small insects, whose wings are destitute of veins, or very nearly so, the Chalcis flies having the antennæ elbowed or flail shaped, whilst in Proctotrupes they are straight.



Wing of the Curculio Parasite.

We thus find this fly to pertain to the Bracon family. In our books this family is usually divided into six sections. One of these sections is very peculiar. In it the abdomen or hind body is not divided into several joints, as we usually see it in insects, but consists of only a single piece in some, and in others one or two transverse lines are seen, separating it into two or three parts, instead of the six or seven, which is its customary number. In the fly before us we find the abdomen thus consisting of only three parts. This character with the further ones that these flies have a projecting tail-like sting, and the wings have only two apartments or cells along the outer side of the middle vein, on the posterior half of the wing, shows this fly to pertain to the genus named *Sigalphus.*



Curculio Parasite, greatly magnified; the cross lines indicate its natural length and width.

The most appropriate name for this fly will be the Curculio parasite, *Sigalphus curculionis.* Its body is sixteen-hundredths of an inch long, its wings being somewhat longer. It is black, with the mouth the underside of the first joint of the antennæ, and the legs orange yellow, the hind feet and shanks, except at their base, being black, and sometimes the tips of the hind thighs also. Its abdomen is occupied with very fine dense longitudinal lines, leaving a smooth stripe along the middle of its second segment, and a large smooth space on the base of the third segment. The sting resembles a coarse bristle, projecting backwards about the length of the abdomen. It is composed of three threads, the central one orange and blackish towards its tip, and the lateral valves black. All the specimens sent are females. The males will be destitute of the sting, and will probably be of a smaller size.

From analogy we know with a considerable degree of certainty what the habits and proceedings of this fly will be. Soon after the eggs of the Curculio have hatched, and their young worms have commenced feeding, and mining their burrows in the interior of the fruit, this fly will make its appearance, walking around upon a plum or apple, with its antennæ stretched forward and applied to the surface, and rapidly vibrating, until it discovers where one of these worms is lying: for by some astonishing acuteness of the sense of feeling, or some other sense in the antennæ, the Ichneumon-flies and their kindred are able to detect the precise spot where a worm lies imbedded in the interior of wood, bark, or other substance, merely by touching these organs to the surface above it. Some writers have hence supposed that the antennæ are the organs of some sense wholly different from any of those possessed by the human race, and of which it is therefoer impossible for us to form any conception. The sting of this fly, it will be noticed, is of the exact length requisite to enable it to pierce a plum or young apple to the depth at which the Curculio worm usually lies in it. This operations it performs, and having reached the worm, it punctures its skin and inserts an egg therein. It then withdraws its sting and flies to another plum, where the same operation is repeated. It perseveringly continues this work till its whole stock stock of eggs is disposed of. Thus a hundred worms, probably, are "ichneumonized," as it is termed, by each one of these flies. The egg hatching, the worm therefrom feeds in the interior of the Curculio worm, but without attacking any of its vital parts. It thus grows with its growth, until the enfeebled Curculio worm finishes feeding, and crawls from the fruit into the earth, perhaps with sufficient strength remaining to enable it to take on its pupa form before it expires. And finally, instead of a Curculio beetle, one of these parasitic flies comes from the pupa shell. Thus Mr. BEADLE saw nothing but Curculio larvæ in the black knots, and passing from them into the sand, and probably supposes he was so superficial and obtuse, that he failed to detect another kind of larvæ which were there to produce these flies, whereas the latter were all the time concealed from view, within the Curculio larvæ.

As to the black knots on plum and cherry trees, I here have space to say only a word. Having now carefully dissected and examined them, from their first commencement to their complete growth, I am perfectly assured they are a vegetable fungus, more analagous to the smut on corn, (those large masses of a black sooty substance which grow upon the ears, tassels, and sometimes directly from the stalks,) than to any other common thing with which we are familiar. Like many other fungi, these knots are a favorite abode of the Curculio worm, and some other insects, which have hence been supposed to cause these excrescences But they sometimes grow to maturity without any of these insects finding them to nestle therein. ASA FITCH.
September, 1859.

☞ THE ILLUSTRATED PHRENOLOGICAL ALMANAC for 1860, has been sent us by its publishers, FOWLER & WELLS, New-York. It has its usual number of characteristic sketches and illustrations.

Harvesting and Curing Beans.

The "Best Way to Stack Beans" recently (Co. Gent. Sept. 15, '59) copied from the *Boston Cultivator*, is no doubt a very safe one, but it requires a good deal of labor and expense to put it into practice. A farmer with ten or more acres of beans to harvest, would require a great many trees for stack poles each year, and it would take a good many days' work to trim and set them. We have practiced an easier way of harvesting, and a more simple method of stacking when the weather seemed likely to be unfavorable, or the leaves required more curing than we liked to risk without that precaution.

In dry seasons, and with early and evenly ripened beans, simply pulling and placing in rows—say five rows thrown into one—to be left for a few days to dry in the sun, is all the cure required. When the latest pods has turned yellow, the pulling should be performed, and drawing in should take place as soon as the leaves are dry enough for threshing. We have seen them stand on scaffolds and in small mows at this time until mid-winter—when they thresh more easily than in warmer weather—and they come out in excellent order.

A former volume of the Cultivator (May, 1850, p. 165) contains an article on bean culture from Hon. S. Cheever, of Saratoga Co, who has had much experience with this crop. He lets the beans stand until they get so ripe and dry that they can be pulled one day and threshed out the next, and has often pulled in the forenoon and threshed in the afternoon of the same day, which avoids the risk of rain. He says that if heaped in the barn they soon get damp, and will not thresh without bruising—that they should be spread after threshing and cleaning until perfectly dry. Beans are usually fit to harvest about the middle of September. Frost does not hurt them after they are ripe. We have got into the habit of planting too late, in many instances, to make a good crop. The first week in June is late enough.

But to return to wet seasons and stacking beans, from our experience When the autumn is rainy, it is almost impossible to harvest beans without stacking, and a few years ago we had a trial of our plan, with most satisfactory results. Our beans were pulled on dry days, and stacked around stakes, with the roots or the beans in the centre. They were laid in a neatly formed stack, about thirty inches across, and about seven feet high before settling They cured well; the loss from exposure to the weather and shelling, was estimated at less than one bushel per acre, and the straw, placed in a mow when threshed, came out bright and dry feeding for sheep in winter.

The stakes used were some collected in removing a "staked and capped fence," and some prepared for that purpose. Using a crow bar to make the holes, they were set firmly in the ground, and then a few stones and a little straw put around the foot to keep the beans from the earth. Each person, as they pulled, kept their armful straight, and laid them with the roots to the center around the stakes. Last year we harvested ten acres, in good order, on this plan, and shall pursue it while we continue in the culture, in all cases where the beans are partially green, or when the weather is rainy and unfavorable. But unless the market demand is a little sharper, and prices run higher than of late years, we shall grow only to supply the home demand—for kitchen use and sheep feeding. For the latter purpose they are worth as much as corn, and are better suited to sheep than that grain or any other. When cooked, hogs may be fed upon them, and we think profitably. B. *Niagara Co, N. Y.*

The Highland Society's Dinner.

Our foreign correspondence has contained an account of the Exhibition at Edinburgh, last month, of the Highland and Agricultural Society of Scotland. At the dinner the health of strangers present was given, and the Duke of Atholl, who occupied the chair, called upon Mr. TUCKER, of the *Country Gentleman*, to respond.

Mr. TUCKER, in returning thanks for the honor, expressed his high appreciation of it, and said that the visitor in Scotland, from the United States, already felt acquainted with the Scotch. There they were known as successful, and respected in the learned professions, energetic and enterprising in business pursuits, thorough-going, systematic, and what was still better, money-making farmers, unfailingly contributing, whatever their position in life, a full share toward the prosperity with which that country had been favored. Knowing the national virtues, he trusted that he would not be the less qualified to appreciate them, as manifested in their native land—a land hallowed, as it might be justly said, by so many associations of poetry and romance, and the names of so many of whose sons were inherited as an imperishable legacy from the past. If it had passed into a proverb, that a Scotchman was never at home except when he was abroad, it might surely be added, that he never went abroad to find a home, without carrying with him the principles of thrift and of good faith toward both God and man. Allusion had been made to the fact that he was present as a delegate from the State Agricultural Society of New York, and occupying that position, it was both a duty and a pleasure for him to express the sentiments of sympathy and congratulation with which they regarded the advancement and present high position of the Highland Society — the senior among associations of the kind, and still apparently as full of vigor as though three quarters of a century had not passed since its foundation in 1784. During those seventy-five years, those who were better informed as to the relative position of the farmer then and now, could best say what progress had been made, but he thought there were no statistics to give all the details of the improvement brought about, to count the millions of pipe and tile that had been buried under the soil of Scotland, or the hundreds of engines that had in that period substituted the tireless energy of steam for the weary human arm, in thrashing out the more abundant harvests of the present generation; that could tell us how they had added to the actual area of their country, by adding to her capacity of profitable production. Still less could mere statistics enable us to estimate the additional comfort and intelligence diffused among the people themselves; for, however contrary to a prevailing impression, an American was able to conceive of something beyond the realm of the almighty dollar alone, of a progress that was not wholly expressed in a formula of pounds, shillings and pence. It was, indeed, that kind of progress—a progress in all that could elevate the man, and by showing him the path of individual improvement, thus effected the moral, social, and intellectual elevation of states and nations; it was this progress that constituted a fit subject for felicitation, and it was here, and here only, that he hoped there might ever be a spirit of rivalry between Great Britain and the United States. His Grace, and the members of the honorable body over which he presided, had been kind enough to propose and drink a stranger's health, and he begged them to accept a stranger's God-speed in all the good they were doing; it should be their part, in other lands, to emulate such an example.

Making Soap.

I wish you to inform me through the "Cultivator," of some of the mysteries of soap making; our *modus operandi* is to pass the lye through slacked lime, then boil and add fat; sometimes the lye and fat will unite, but often the fat will float on the top as soon as cool. Why is this? Or what are the requisites for making soft soap of wood ashes. D. F. B. *Portersville, Pa.*

The best process for making soft soap is simply this: First. Procure good ashes; place a half peck of caustic or water slacked lime, in the bottom of the leach, for each barrel of ashes; if air slacked, the quantity must be larger, according to the time it has been exposed to the air. It is usual to place straw below the lime, to prevent the water from carrying it off in particles. Place the ashes on the lime, beating it compactly as each successive layer is applied, till the leach is full. If not beaten solid, the water will run through too soon, and the lye will be weak. A stout barrel, slightly inclined, with a hole bored through the bottom, makes a good leach. It should be placed on a piece of broad plank, with a gutter cut around it, to collect the lye; and high enough from the ground to set a tub under. The water poured upon the ashes should be hot, until the lye begins to run; and the time that should elapse after the water is first applied, till it passes through as lye, should not be less than twenty-four hours; if sooner, the ashes has not been beaten sufficiently, and the lye will be too weak. It will continue to run as long as water is applied, but at the same time growing weaker, as the potash becomes carried off.

If the ashes could be perfectly fresh, no lime would be required in the leach; as when first burned, ashes are caustic, but gradually lose this quality by absorbing carbonic acid from the air. The lime abstracts this carbonic acid, and renders the lye again caustic.

If lye is not strong enough to float an egg, it will not make good soap—but we have known it to do this, and still cause a failure, if not sufficiently caustic. The last named defect may generally be ascertained by pouring in a portion of some strong acid, as aquefortis or oil of vitriol, which will cause a violent effervescence—even strong vinegar will do. When this is the case, it shows that enough lime has not been used; and it may still do to apply it. We have known its use to cause success even after the materials for the soap had been mixed together.

The grease must be *first boiled*—then a pint of lye added—afterwards a quart—and so on by gradual additions till the soap is made. A barrel of good ashes will make a barrel of soap—but if the lye is strong enough to combine well with the grease, the soap will be too strong, and injure the clothes. This is remedied by adding a pail of water to each pail of freshly made soap, or diluting it.

Family Recipes.

MESSRS. EDITORS—It has been my practice for a long time of writing down in a small book which I keep for the purpose, all useful and really valuable recipes for domestic purposes. Many of these are original with myself, and all of them have been many times proved, so that I can testify to their being what they are represented, recipes of value in every household.

PAINT.—For a durable and cheap paint for house floors, dissolve one ounce glue in a quart of warm water, thickened with paint. After being put on, go over with a coat of boiled linseed oil. It will dry in ready for use in two hours.

PICKLES.—For one half barrel of pickles, make a brine of two quarts of salt with half pound alum. Keep the barrel covered tight. Pickles preserved in this way require only to be soaked over night to be ready for use.

LINIMENT.—One of the best liniments for lameness, rheumatism, sprains, &c., is made of three ounces of sulphuric ether, one ounce alcohol, half ounce oil lavender, two drachms laudanum.

HAIR DYE.—A durable dye for coloring the hair, to be dried in the sun after using upon the head, is composed of one drachm nitrate silver, one ounce spirits ammonia, one ounce soft water.

From my recipes relating to cooking, I send two or three common ones, with the hope that they will prove acceptable to your readers.

SOFT GINGERBREAD.—One pint molasses, one cup butter, half cup milk, two eggs, one teaspoonfull cream tartar, two teaspoonfulls soda, one tablespoonfull ginger, four cups flour.

LONDON SNAPS.—One pound flour, four ounces butter, one cup full common sugar, half pint molasses, third cup full ginger, with a little salæratus

JOHNNY CAKE.—Three cups sour milk, three cups Indian meal, three tablespoonfulls molasses, one egg, with a little flour, salt, and salæratus.

Perhaps I may give you, at some future time, further cextrats from the recipe book of, yours truly, M. S. M.

Top-dressing Lands.

Messrs. Eds.—Some scientific farmers have promulgated the idea that all manures applied on the surface of the earth, lose a great part of their value by evaporation. This is undoubtedly true many times, and at others a more beneficial effect comes from the application, than if it have been otherwise made. We give one or two illustrations that have recently come under our observation.

A year ago farmer C. sowed a field of rather frosty land, facing the northwest, to winter rye. We thought the field rather unpromising to the crop. It looked passably well, however, through autumn and spring. The middle of June we passed by it, and could not help remarking the difference between a couple of acres in a lower corner, from the other parts of the field. The first impression was, that it was a different grain but as we reached the field bordering on the wayside, we saw it was rye and nothing else. We inquired of farmer C. the cause of difference, and were informed that all parts of the field were subject to the same treatment, except the corner giving "the largest and best," was top-dressed with good manure after sowing. It appeared to us, at the time, that this fertile corner would be ready for harvest a full week before the other part of the field, and were informed that it was sowed ten days later, making half a month difference in the time between sowing and harvest in the two pieces or portions of the field.

Farmer D. sowed oats last spring in two fields of a similar soil. The difference in cultivation had been that field number one was planted with corn the previous year, and well manured with rotten manure in the hill, and was sown to oats about April 20. No. 2 was, in part, planted with corn, manured in the hill with recent manure, and a part planted with potatoes, and no manure given. This field was plowed and sowed to oats about April 27, and a top-dressing of eight loads of recent manure applied to the acre. No. 2 was ready for harvest a full week earlier than No. 1, the straw was brighter and the grain heavier, and what was more, the grass sown had taken a much better start. In these cases, and we are sure they are not solitary ones, top-dressing plowed crops has been beneficial, by increasing the crops enough to pay cost, leaving the ground in much better condition for future harvests. It has also given new proof that giving fertility to the land lengthens the season, equal to from ten days to two weeks, or in other words, by giving strength to land, it is enabled to bring forth and mature a crop in so much less time than it would do without this cultivation, a consideration of no small importance in our climate, and especially in seasons like the past.

Top-dressing grass lands has been practiced as far back as our memory runs. Formerly, farmers drew the manure for this purpose on their meadows in autumn, and let it lie in small heaps until spring, when it was spread, leaving a full share where the heap stood, which, of course, had taken a pretty fair benefit from it in the fall and early spring rains.

Experience has now taught a better practice, which is to spread the manure evenly from the cart, just early enough in fall to have the rains incorporate it with the earth as much and as soon as may be. In this way the roots of the grasses feed upon its juices in autumn, and what is quite as valuable, it forms a little extra covering for the roots to protect them from the cold of winter. From this the crop derives great benefit.

Compost forms an excellent dressing for grass lands. We have tried spreading simply the soil from the road side, with good effect, but had this or swamp muck, of which there are thousands of acres now lying useless and worse, for they are continually filling the air with miasma, allowed to be mixed with one-third or one-half yard manure, and to lie so mixed for one season, and then spread, they would produce a very fine effect. One load of such a compost—where a half or two-thirds are taken from the swamp—is worth as much on meadow land, taking the time of continuance into account, as a load of livery stable manure, though it does not cost a half as much as the latter at present rates. W. Bacon. *Richmond.*

Snap Dragon—How to Destroy it.

Farmers of Rensselear county, awake! There is an enemy lurking in your midst that, ere you are aware, will take you captive—will bind you with fetters of brass, from which, if you slumber on a short time, you will be unable to free yourself. I would say that there is a weed, called Snap Dragon, rapidly spreading over Rensselear county. To those who are acquainted with the weed, I cannot too vividly picture its obnoxious qualities. To those who are unacquainted with it, I would say that to my own knowledge it has completely ruined several farms, rendering them nearly unproductive, and entirely unfit for pasturage.

This weed spreads very rapidly, sometimes obtaining entire possession of a farm in five or six years.

Now for the means of destroying it. I have had the roots dug out very carefully, and carried off for three years in succession. The result was that it spread as rapidly as ever. It has great quantities of small fibrous roots, which I could not remove. I then applied the best quality of fine salt, and succeeded in exterminating it. I neglected mine (not knowing what it was,) until it covered nearly a half acre of ground. This year I found about half a dozen stems, to which I applied salt as usual. A Rens. Co. Farmer.

Black Leg in Calves.

Editors of the Country Gentleman—In your number of August 4th, are some inquiries by Andrew Stephens, in regard to a fatal disease that has made havock among his Durham calves. Three years since we had some sad experience in the loss of a number of our finest calves, and with a great deal of care, and applying all recommended remedies, with a great many calves, after the disease was fairly developed, and saved but one, and that cost twice as much as it was worth. We watched for the early symptoms after we became acquainted with the disease. With the first symptoms we would give from a half to one pound of salts, and then in a short time bleed freely. I believe we saved all we treated in this way, in the early stages of the disease. With us the calf, in some cases, would be well at bed time, in the morning be dead and stiff.

The disease, in its various stages, is called the Black Leg, Quarter Evil or Black Quarter. You will find in Clater and Youatt's Cattle Doctor, page 82, a full description of the disease, and the proposed remedies and cures. Amos Ballance. *Pleasant Hill, Mercer County, Ky.*

How to Keep Milk.

I never argue this question with man or woman, if they do not know that milk can be kept with all the cream in it, as it is when first drawn from the cows; but I will tell you how it is done. You all know that if you can prevent the cream from rising, the milk will be more palatable and healthy, with the particles of cream mixed through it, than skim milk, or than milk fresh from the cow, with the fresh taste and odor. To prepare milk in this way, take it while warm from the cow, set it in a cool place, and stir it continually until all the animal heat is out, and no cream will rise after that operation. Try it, and see how much it will be improved for family use.—A. B. Dickinson.

THE CULTIVATOR FOR 1860.

Enlargement in Size and Type.

REDUCTION IN PRICE.

Premiums and Inducements to Agents.

In making their arrangements for the new Volume and new Year, the Publishers of The Cultivator have determined upon some improvements which cannot fail they hope to meet with a hearty response from the Agricultural Public.

It will be remembered that since its foundation more than a quarter of a century ago, The Cultivator has ever held a prominent position among periodicals of its class. In 1853 the Country Gentleman was established as a weekly journal, and the facilities thus acquired by the publishers have enabled them to command for the two journals a correspondence in all parts of the Union, unequalled it is believed, either in extent or sound and practical character, by any cotemporary. Furnishing monthly at a price exceedingly cheap, such portions of the matter first contained in the weekly, as the limits at command would allow, they have been able to give The Cultivator a rank and value it would not have otherwise been likely to attain, even at double its present subscription price.

But when in 1853, the price was reduced from One Dollar per annum to Fifty Cents, the size of the page was also made somewhat narrower and shorter in order to admit of its coming within the border rules. Nevertheless, for a year or two back by reducing the size of the type employed, a vast quantity of matter has been compressed into its columns.

It is now proposed, however, to ENLARGE both the page and the type to the same size as when the Cultivator was issued at One Dollar per year. This change will take place with the January number, and will be a welcome one to many who have found the small type inconvenient, and who will at the same time receive as great or even a larger amount of matter in the new form as in the old.

The price of The Cultivator is uniformly Fifty Cents a year, all subscriptions beginning with the January Number. But we offer

I. A Premium to every Club Subscriber.

The Illustrated Annual Register of Rural Affairs is the title of a Premium Volume issued each year, mainly for presentation to Cultivator subscribers, although it commands a large sale to others at its retail price—*Twenty-five cents per copy.* The Number for 1860, just issued, and a summary of the contents of which appears on the last page of this paper, contains no less than *One Hundred and Eighty Engravings*, besides a beautifully illuminated cover, and over a hundred pages of reading matter exclusive of the Almanac for the year. ☞ As it has been found difficult to collect and remit the postage paid upon subscribers' Premium copies of the Register, the publishers now offer to bear this burden themselves, and *Five Dollars* will therefore pay for Ten Copies of the Cultivator for 1860, each accompanied by a copy, *postage prepaid*, of the Annual Register. This is a considerable reduction, especially as they also offer—

II. A Premium to every Agent.

The efforts of the friends of THE CULTIVATOR, old and new, are solicited in adding to its circulation; but this assistance is as largely remunerated as the low price at which its terms are fixed will admit. It has been determined to offer for 1860—

1. To any one sending *Ten Subscribers and Five Dollars*, a Premium copy of the Cultivator and Register one year, free, for his own use.

2. To any one sending Twenty Subscribers and Ten Dollars, either of the following:

The Country Gentleman (weekly) *free* for Six Months;
or, A Complete Set of the Annual Register *postpaid*, six years;
or, Volumes of the Cultivator postpaid, for any *Two Year* ssince 1852;
or, Two Extra Copies of the Cultivator and Register for 1860.

3. To any one sending *Thirty subscribers and Fifteen Dollars*, either—

The Country Gentleman free for One year,
or, Ten Premium Copies of the Annual Register for any desired year or years,
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or, Three Extra copies Cultivator and Register for 1860.

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Twelve Premium Copies of the Register,
or, Volumes of the Cultivator for any Four Years since 1852,
or, Four Extra Copies Cultivator and Register for 1860.

☞ To the above Terms, Subscribers in the British Provinces must invariably add Six Cents per copy for the postage prepaid upon their papers.

Subscriptions for the Country Gentleman.

In obtaining the Premiums above offered, a subscription to the Country Gentleman at $2 per year, will count the same as Four subscribers to the Cultivator, and the subscriber to the Co. Gent. will receive one copy of the Register.

SAMPLE COPIES

Of the Register to show for the purpose of obtaining subscriptions, will be sent to all those who have lately acted as Agents for the Cultivator, immediately, and any one who accidentally fails to receive a copy, will please inform the publishers, when the deficiency shall be promptly supplied. And, lastly,

☞ EVERY READER is requested to act as Agent, and any one wishing copies of the Cultivator and Country Gentleman for the purpose, will at once receive them, together with a copy of the Register, upon application, giving the address clearly and distinctly.

☞ Agents who wish the Register to supply to every subscriber as fast as they take his name, can remit for them at the rate of Fifteen Dollars a hundred, (15 cents apiece,) and on the completion of their lists, send the remaining 35 cents for each subscriber, when the Premium due upon the whole will likewise be adjusted. This has proved an excellent plan: each subscriber, as soon as he pays his Fifty Cents, receives one-half of his money back in a Twenty-five Cent book, and the Agent has no farther trouble in the collection of the money. Address

LUTHER TUCKER & SON,
Publishers of The Cultivator,
No. 305 Broadway, Albany, N. Y.

Foreign Editorial Correspondence.

The County of Kent.

Something more, I believe, than nine hundred thousand acres of land, arable and meadow, are comprised in the county of Kent. Lying to the southward of the Thames it has the advantage of immediate water communication with the metropolis, not only along the Thames itself, but also from the mouths of the Medway, Stour and Darent rivers. A drier climate and considerable variety of soils give it some agricultural advantages over other counties. Romney Marsh boasts of over 20,000 acres of the richest pasturage, rescued from the sea, in the south. The deep and fertile loam of East Kent is among the finest wheat soils in England, and both here and on the ragstone rock and green sand of West Kent and Mid Kent, and on the best drained clays of the Weald, are found the hop gardens which contribute, in a large proportion, to the flavor of that liquor so refreshing to the thirsty Briton, and so widely disseminated from the breweries of Staffordshire and London. Indeed it is stated that Kent produces about one-half of the hop crop of the kingdom, having in 1849 nearly twenty-three thousand acres thus employed, while only twenty thousand were then used for the purpose in all the rest of the country.

Farming at Macknade, near Faversham.

The gentleman whose name I mentioned at the close of my last letter, Frederick Neame, Esq, was farming about 270 acres, divided nearly as follows:

75 acres in wheat.	23 acres in turnips.
44 " barley.	25 " mangolds.
22 " hops.	24 " clover.
32 " beans.	Remainder in pasture.

The system of rotation pursued was one of nine years, for example, 1, turnips; 2, barley or oats; 3, wurtzel; 4, wheat; 5, red clover; 6, wheat; 7, barley or oats; 8, beans or peas, and 9, wheat—thus securing five white crops, three of them wheat, to four green crops. To take this rotation from the beginning, the turnip crop will have been preceded by wheat; after that was harvested, a kind of plow or cultivator, called a broadshare, was passed over the land, a flat point 18 inches wide being carried about 3 inches below the surface, not turning over the ground at all, but cutting off the roots, and killing the weeds. By this operation and the subsequent harrowing, the ground is so stirred that the seeds of noxious plants, as well as those self-sown by the last crop, will vegetate. Immediately after the broadshare, the harrow is twice used to free the ground from the stubble, which is gathered in rows every fifteen or twenty rods, according to quantity, and if thought worth the labor, or in default of straw enough, this is carried to the yards, to be trodden into manure; otherwise it is burnt. A second plowing takes place, if possible, before the middle of October, say 8 inches deep, burying any vegetation that has started, and throwing the soil into furrows as rough as possible, in order that the frost may act upon it; for the rougher and the larger lumps in which it lies, the better will a spontaneous disintegration be effected during winter. The next process is a plowing the last of March or the first of April, after which the land is harrowed twice and rolled. The second spring plowing is done with the broadshare, and after another harrowing and rolling, the manure is carted out and spread, and plowed in six or seven inches deep. Then there is another harrowing and rolling and the land lies about a fortnight, when, if the weather is dry, the broadshare may be once more employed. Swede turnips are sown about the first week in July, and white turnips about the third week—about half and half of each being grown. If mangolds was the crop, the preparation of the land for it would be similar, except that one plowing would be omitted, as the seed is sown the second week in May.

The white turnips make good bulbs in six or eight weeks after sowing, and in ten are fit for feeding, being the earliest root on which the sheep are put. The Swedes succeed, and when they are gone, which should not be until late winter or early spring, the mangolds come in season, their great merit being their keeping qualities I saw through June and July, here and there, the last of the mangold crop of the preceding year not yet entirely exhausted, although they were said to be suffering rather more from decay than usual. The turnip growers sell in spring the sheep fatted during winter upon roots, while the Marsh farmers winter their flocks on the highlands and take them back again upon the pasturage during a second summer, so that they finally come to market toward the close of the year.

Cost of Cultivation, &c.—Stock Feeding.

The above facts show the labor undergone to *clean* and *cultivate* thoroughly for a green crop. It will be noticed that the autumn plowing was the deepest, when any raw subsoil that may be brought up is sure to have the benefit of the exposure, and to become well aired and intermingled. The spring succession of plowings, harrowings and rollings, renders the field like a garden. The smooth roller on light land, or a serrated clod-crusher on heavy soils, not only breaks the clods and pulverizes them, but mats together the tufts of couch or twitch, so that the harrows get at them better. Each dressing costs about five dollars, say $3 for the plowing alone and $2 for harrowing, &c., and three of these will make an expense of say $15 per acre to start upon. Then the turnips are sown with artificial manure, and the cost of this, together with the farm-dung employed, is about $50. Add to these two items $20 more to cover rent, taxes, tithes, &c., and then put down the cost of seed, sowing, hoeing out and harvesting, and the total cost shows a considerable surplus over the value of the crop either for sale or for home feeding—which loss is placed against the great gain of the soil both in fertility and tilth. In fact the farmer has not incurred a very great expense beyond that he would have been obliged to undergo if his land had been a bare fallow in cleaning and manuring it, while he has his turnip or mangold crop to cover at least a considerable proportion of the outlay.

The second crop in the rotation will produce in seasons at all favorable, on this rich loam, fifty-six bushels to the acre of barley, or eighty of oats. If the turnips are so disposed of that the ground is clear of them by Christmas, the barley is put in before that date, and what is sown thus early almost invariably yields the best sample of grain. Living so nearly adjacent to water communication with London, my host often disposes there, of his hay and root crops, particularly mangolds, and purchases in return manure from the city stables and other sources—transportation being cheap enough to admit of this being a better policy than the home manufacture of fertilizing material, by the feeding of stock and the purchase of oil cake. But he generally keeps one hundred and fifty sheep to take care of the turnips, and will perhaps feed a dozen bullocks. Beyond four miles from the water the cartage of manure is found too heavy to make it profitable to buy, instead of yarding the necessary dung. The Agricultural year begins at Michaelmas, October 11, about which date he would buy in the cattle, and they will be ripe for the butcher in spring. Soon after harvest the purchases of sheep are made, and they graze upon the grain stubbles in the day-time, and in the night upon the clover-fields, from which two crops have previously been cut, until Michaelmas, when they are put upon the turnips for the whole twenty-four hours, receiving in addition, in troughs, about equal quantities mixed, of clover and straw, with oil cake. The first cost of the lambs is about an average of eighteen shillings sterling (say $4 50) per head, and they are sold along after shearing, probably during the month of May, for perhaps fifty-five shillings ($13 to $14) Of this about two dollars, as I understood, is received for the wool, which yields an average of six pounds per head, and varies in price from twenty to thirty-six cents a pound.

The cattle grazed are principally the Irish or Welsh stock that comes into the county in spring at about 18 months old, is grazed in Romney Marsh during the summer months, and about the middle of October again changes hands, then coming to the stall feeders for final preparation for market. In the application of manure, whether manufactured or purchased, Mr. NEAME expressed the belief that a moderate supply for every crop, was a better system than an infrequent application, however profuse. Wheat after clover is perhaps his only crop which receives nothing, but the clover has been manured, and the grain itself, if the land is too rich, will be liable to *lay*, particularly in a season tolerably wet and windy.

Mr. N., I am sure, will pardon me for the publication of so many details at length from his practice; for, in that spirit of generously giving all information likely to be of service to others, which I found so generally prevalent among the farmers of Great Britain, he kindly permitted me to inspect his accounts as well as his outdoor operations. My thanks should be recorded for the interest he so kindly manifested in furthering the objects of my visit, and when I express my regret that the limits necessarily prescribed for it were such as to prevent the accomplishment of plans projected for some days in advance, that would have been both delightful and instructive to me, I am only saying what I shall have to repeat in writing of my visits at many other farms whose owners manifested a spirit similarly obliging, and whose methods of agriculture were equally well worth a more prolonged and detailed examination.

Kent is not regarded as a county of "high farming" in comparison with some other districts, Norfolk for example I think; and still upon not quite 270 acres, my host was spending no less than one thousand seven hundred and fifty dollars a year for fertilizing materials; his pay roll for labor was about $3,800, and his rent, tithes and rates amounted to $4,700.* In the rotation mentioned, mangolds are sometimes substituted for beans, and a greater bulk of manure can be put on the latter, and more if it will be left for the succeeding wheat crop. Ten pounds sterling of manure should yield 30 tons of mangolds, while it would only produce 6 quarters beans. The former will sell in London for about 18 shillings per ton, while the latter are worth perhaps 45 shillings per quarter. Clover hay sells for about £4 10s. per ton, and two and a half tons may be depended on as the yield per acre for two cuttings. This is a low estimate, both as to quality and price, for they reckon on a good clover field to bring sometimes £16 per acre. The cost of cutting is $1.25 per acre, and an equal sum in addition will cover the expense of curing and hauling. About 40 bushels of soot per acre is recommended for the clover crop, and it costs sixpence sterling per bushel

There are five soils in the county—1, the chalk land, consisting of a rich and productive loam which is naturally drained, and reaches sometimes to a depth of several feet above the chalk formation,—a soil productive for "corn;" 2, the London clay, requiring drainage, and when this is effected, also a good wheat soil; 3, the green sand rock, also kind for both "corn" and hops, particularly the latter, which are of first quality, and yield productively—this is the Maidstone district; 4, the Weald of Kent, stiff, not so rich, badly drained, bad carriage and no manure; and, 5, the alluvial deposits of Romney Marsh, washings of finely comminuted clay and sand, rich for crops or pasture. My informant knew of some fields, and referred to a particular farm in the latter district which for many years, he thought since 1810, had been cropped alternately with wheat and beans, receiving no manure, and now as productive as ever.

The hay for the London market is cut from the stack in trusses of exactly 56 lbs., 3 feet long, 18 inches wide, and 18 inches deep. Thirty-six of these trusses I think count for a ton or "load." All the hay and grain is stacked, and to the neatness and regularity with which these stacks are made, I shall have occasion elsewhere to refer. Stacks, rectangular in shape, cut up better for hay, but round ones are often preferred for "corn" as having less surface exposed.

As illustrative of the difference between the English season and our own, I may mention that the pea crop, harvested about the first week in July, is sown in *January or February*, months when we are cutting and housing our stores of ice and gliding over frozen ground and solid snow to the music of the sleigh-bells. In fact there is no month when out-door work does not go on in England, and the great season for plowing matches in fact is the winter. Nature, perennially vigorous in tropical climates, if she has not favored Great Britain with a summer that ripens the luscious fruits of the south, has given her a winter free from the rigors of the north, and if she is herself more sluggish at one season permits during the other the active exertions of the cultivator. January might almost be termed the only winter month, for the operations of autumn are continued until Christmas, and with February begins the business of another spring. March and April come in to supply what we have very little of, real spring weather of germination and slowly expanding growth, in lieu of that intermixture of summer and winter which this quarter of the year in America appears to the emigrant to resemble. The rye sown for early feeding, is high enough before the middle of April, for the pasturage especially of the ewes and lambs, and by the time our grass at home is just becoming verdant, and while it is yet too often drowned down by the superabundant moisture, their "layers" and permanent grasses are often covered with a luxuriant and tender herbage already under the tooth of the flocks and herds, at least in Southern England, although at a latitude corresponding nearly with the northern extremity of Newfoundland and the southern coast of Labrador.

But I have not yet come to the hops, and other subjects have extended themselves to such a length, that I shall have to postpone until another letter, what is really the chief feature in the Agriculture of Kent.

Extracts from Letter XVII:

Agriculture, although generally concerned with certainties, is not entirely without its speculative branches. It is in the main a paying occupation, but a slowly paying one; and if, in any particular crop, the profits obtained are occasionally large, they most often find their offset in seasons of disappointment and loss, and the average result is found not to vary very widely from the "even tenor" of the farmer's ordinary way. It struck me that the farmers of Great Britain are more than ordinarily independent of the contingencies of season; they are certain at least to get a crop which we should call a fair one, under almost any event, and if they are favored according to their calculations, a yield which strikes an American as most astonishing is produced with such evenness upon a wide extent of surface, that one would think Nature in league with the cultivator to repay him as richly as possible for his toil. The effect of this appears to be that the great fear of the English agriculturist is not so much whether his own crop shall fail or shall succeed—give him manure, drain his soil, and clean it tolerably, and he will take his own chance, (comparatively speaking,) of this; – but the great cause in the difference of his profit in different years, arises from fluctuations in price, over which his own crops have less control than those of other parts of the world, and which sometimes force him to sell, at an actual loss, the abundant harvest which in a different state of feeling at Mark Lane, might have added wonderfully to his resources.

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* To be precise, the farm contains 268 acres, and the payments for artificial manures during the past year were £216, and for oil cake £135—total £351. For labor £760 was paid, and for rent, tithes and rates £990. The tithes were very high, being sixteen shillings and sixpence sterling per acre, or about $4.

The Hop Crop and the Tax upon it.

The hop crop is an instance of one upon which the season not only has a great effect, but which also, and for this very reason mainly, fluctuates I may perhaps say more widely than any other in the price it brings. It requires great capital to start upon, great patience to wait for, and great philosophy in accepting the chances it brings, from season to season, of winning or of loss. Mr. PAINE of Surrey, mentions that soon after the introduction of the plant into Great Britain from Flanders, about 1525, petitions were sent into Parliament against its use, and denouncing it as a "wicked weed." Some who have expended largely upon plantations to find them in the end failures, have been ready I imagine in these later times, to agree with their forefathers, and to wish that they had retained a taste for the pure malt juice untainted by the aroma of this foreign intruder. Government, too, in its earlier anxieties about the French, forced the hop-grower to ally himself against the elder Napoleon; for the crop was taxed to yield the "sinews of war," and, when the war days were over, these sinews being found convenient in operations incident to peace, the tax failed to be removed. The first tax, however, was put on in the days of George the Second, but so many changes has it since passed through, that one finds it difficult to trace the seventeen or eighteen shillings per cwt., which now goes into the governmental pocket, all the way through its origin and odd variations. Beginning with a penny a pound, for example, in the course of some years afterwards "three five per cents." were added, subsequently ten per cent. deducted, and then in the great struggle at the beginning of this century, the total was increased to something like two pence and three-quarters, per lb. (or more than $6 per cwt.;) then came a reduction to two pence a pound, with a further reduction of 10 per cent. for tare on bags, and finally, last change of all, an addition of 5 per cent. for excise duty. So that, did not government kindly vouchsafe to furnish the calculation, it might not now be very easy to follow out these additions, subtractions and percentages; but the authorities have taken care to make the additions keep the poise of the arithmetical balance generally in their own favor, and the farmers have paid whatever they were charged, perhaps with a wry face now and then, but on the whole with a wonderful degree of equanimity. And, now, I think they rather enjoy this tax than otherwise—at least those who succeed with their own crops, and who, like the rest of the world, bear the failures of their neighbors with a neighborly resignation.

A crop, however, that is of enough importance to be so taxed, and that is cultivated in America with nearly quite as wide diversity of success, deserves more sober and respectful treatment at our hands. I visited Kent just at the right season to walk between the shady avenues of poles, to look up to the twining arches of foliage overhead, and when on some higher point to see below me the harbingers of profit, seldom more thickly clustered, by which this verdant covering was variegated; while the circular kilns or *oast houses* in which the hops are dried, form quite a singular feature themselves in the landscape of the country. The "loose axillary panicles," as the botanists call them, which it is the object of the crop to produce, were of a lighter green than the remainder of the vine, and certainly produced a very pretty effect, drooping from their supports twelve to sixteen feet from the ground; and twenty or thirty acres in a hop-field is quite a sight for one to whom its novelty is an additional attraction.

Propagation and Planting.

The hop plant is propagated by cuttings, for which purpose the "layers or shoots of the preceding year" are taken; these may be bedded out during March in nursery ground, and as early as may be in November will be fit to plant upon the ground destined to receive them permanently. This should be a deep soil, and there is none better for the purpose than the loam of this part of Kent, which rests upon calcareous rock beneath. It requires, too, deep trenching, for the roots of the hop are said to have insinuated themselves to a distance of 20 feet or over. The second year they receive poles three feet high. The distance of the hills from one another, as I saw them, was six feet six inches each way, admitting of horse cultivation in both directions, and making in round numbers a thousand hills per acre. It is now considered quite important by some to take one precaution, which I understood had been neglected or little thought of by many growers, namely, to set out male plants at intervals through the field. The two sexes, I believe, are never found in the blooms of the same plant, and while it is the female flower which is solely depended on for the crop, experience proves that when one hill of the male plants is put in, say to a hundred or two of the others, the latter are more productive, and mature their yield earlier than when this course is not followed. Six to ten such hills would be ample upon an acre, and they should be designated in some way from the others, so that when the "bines" are trimmed in spring, the layers if used for propagation may be distinguished from the layers of other hills.

Expenses and Prices.

Around the outside of the ground it is also well to plant a row of the hops quite close to one another to serve as a protection from the winds to those within. Poles twelve feet high are put to all the third year, when a considerable crop may sometimes be picked; but full bearing does not commence until the fourth season, when the poles are sixteen feet high. The average yield then produced may probably be set down for East Kent at seven or eight cwt. per acre, although a good year now and then *doubles* this crop, and a bad one may reduce it almost to nothing. The average in Sussex, where the hops are of a coarser variety, will, perhaps, amount to twelve cwt., but the difference in their market value may more than counterbalance this greater productiveness. As illustrative of the expense and variable return of the crop and its cultivation, I may mention the following facts furnished by a gentleman whose grounds I visited, and who kindly related to me his twelve years' experience as a hop-grower. The average annual cost, including new poles required, five per cent interest on the capital involved, the management of the ground and poles, manure, pruning, tying, rents of land and of kiln, and the necessary cartage, was about $135 (precisely £27 2*s.*) per acre. The cost of securing the crop had varied all the way from £2 2*s.* to as much as £17 per acre—in the former case (1854) with a yield of one half cwt., 5 lbs. per acre, and the price received being £19 per cwt., and in the latter case (1856) the yield being 11 cwt., 3 quarters and 14 lbs., per acre, and the price obtained £4 per cwt. Here is a variation from the lowest price to another almost *five times as large*, and from the lowest yield to a product nearly *twenty-two* times greater! One year the hop tax was *ten guineas* per acre, and the other year *ten shillings*. If this is not enough to justify one in considering the hop a plant of decidedly "speculative tendencies," I do not know what stronger proof could be adduced.

The objection to sowing the seed of the hop, arises from the fact that the product varies from the parent, and consequently but a small proportion out of many may be worth cultivation. Seedlings are said to be more thrifty than cuttings, but there is a great advantage in having a well tested variety, uniform in its period of maturity, and also in being able to get a crop a year sooner from the nursery sets, than is possible if they were seedlings of the previous spring.

Cultivation of the Hop.

One very vigorous plant, or two or three less thrifty ones, may be put into a hill, but unless particular attention is paid to their cultivation during the first two or three years, three plants are thought preferable. Before they come into full bearing, the intermediate spaces may be occupied with a root or cabbage crop, but in any case the ground should be kept clean and in good tilth, as well as plentifully manured. Three poles are set in each hill eventually. They are best of ash, larch or chestnut, although other kinds of wood are used. The hills are all opened the first of March, and the shoots pruned back close to the root with a sharp knife, not more than half an inch or an inch of the last year's growth being permitted to remain. After this process, the hills are covered, in a day or two, and the poles are placed. By May 15, numerous shoots will have advanced far enough to enable the cultivator to determine which are the best, and these are then selected, leaving three to a pole, and the first tying proceeds, performed by women with old matting or similar material. The tying requires great care, and the land must be gone over three times before the "bines" are about five feet high, in order to tie those that are blown down by the wind, and secure them all sufficiently to enable them to twine naturally upon the poles, which they will do for themselves after this time. The hills are twice dug around with the fork during the period thus consumed. If they are flagging at all, artificial fertilizers may be forked in, (rape cake is recommended, or well rotted manure will answer) after the last time of tying—perhaps about the middle of June, when the plants are hilled up a foot or eighteen inches high, in order to retain moisture about the roots. The horse hoe is carried over the ground as often as the season and forwardness of the weeds render it necessary, and those that spring up too near the hills to be cut off in this way, must be cleaned out by hand.

When the "bines" reach the tops of the poles, a ladder-tying is generally necessary, in order that the weight of the further growth of branches and hops may not pull them down. The branches now begin to twine and festoon themselves over the alleys between the rows, making a complete and beautiful covering, especially if seen from above, where the clustering flower cones show to better advantage than below.

The hops are rarely ready for picking before the 1st of September, when the "bines" are cut about 18 inches from the top of the hill, and the poles pulled and laid upon frames, or otherwise arranged for easy picking. The crop should be of a golden color, but it requires considerable experience to determine when it is just right.* The picking costs from one shilling and three pence (30 cents) for a six-bushel basket, up to double this price when the product is less abundant, and it consequently takes a longer time and more work to get an equal quantity. After the picking, the poles are stacked, and during the month of January farm-yard manure is drawn upon the ground, say at the rate of 20 loads per acre, and this is all forked in by hand by the 1st of March.

The Kilns for Hop Drying.

And now we should visit one of the *Oast houses*, and learn its design and way of operation. Much depends upon proper drying, the object being to secure such a circulation of heated air that what is called the *reck* or moisture which condenses itself among the green hops shall be rapidly carried off. The general form of the kiln is circular; the material brick; diameter 15 to eighteen feet, and with a roof running up like the extinguisher of a candle, having a hole at its apex, surmounted by a movable wooden ventilator. Upon the grounds I visited, however, they had in course of erection, a square kiln 20 feet on each side, with a view of rendering it convertible into a dwelling house, in case the hop plantation failed to prove profitable. Apertures are left near the ground to admit the air freely on all sides. Open fires are sometimes employed, or a large stove termed a *cockle;* the fuel generally being coke with some anthracite. Above the fires, ten or a dozen feet, are the slats upon which rests a covering of horse cloth; on this eight inches or thereabouts of hops are spread, so that the kiln I saw would probably dry 400 bushels at once. The drying takes ten hours in a temperature of from 100° to 125° Fahrenheit. Two lots are dried in the 24 hours, so that the kiln is at work both night and day. Sulphur is used during the process to assist in driving off the moisture, and in bleaching the color somewhat lighter.

Connected with the oast-house are apartments for storing, &c., and the hops need not be packed until some days after they are dried. I learn that a packing machine is coming into use quite generally, which will be an improvement upon the old and laborious method of treading them into the *pockets*, as the hop-sacks are called.

Harvest Home and its Sports.

With Mr. NEAME I had the opportunity of seeing one English festival which I should otherwise have lost—the Harvest Home. He drove with me to the house of a gentleman not many miles away, who farms I understood six or eight hundred acres, and whose laborers were all assembled, man, woman and child, to the number of nearly one hundred and fifty, as their master's guests, to have a dinner on the completion of their harvest duties. A tent or marquee was put up on the lawn, and when we came, about three o'clock, we found the company already seated at the two long tables it contained, the steward or foreman at the head, assisted in his office as chairman by his employer's little boy, a bright and pretty child of four or five summers. When the mutton had been thoroughly discussed and the plum pudding had gone the way that all plum puddings go, and the tankards of ale had become as nearly empty as any tankards will where there are ready spiggots to replenish them—the younger men and boys went some of them to cricket or other amusements; the children merrily filled the swings suspended from a tree near by, or joined in various games; the married men consoled themselves with their pipes, and the healths of Queen and host, of hostess and heirs and guest, were given in succession, and some of the tuneful ones sang songs, and it was an hour or two before the word was given for tea. All this time the lady of the feast, whose appearance seemed scarcely compatible with the age of those who called her mother—I suppose in the temperate English climate, beauty is less evanescent than in our own—was distributing kind words and smiles and cheerful glances, which lit in turn the faces however worn by toil and exposure, of those who saw them. The tea was made outside and served to young and old seated around upon the grass, by master and mistress themselves, with a profusion of bread, butter and cake.

Among the children's sports, let me mention one I had heard of before, but never seen, for the benefit of any reader who may be fated to spend half an hour some day in the midst of such a crowd of youngsters in the country, and never to have learnt this way of giving time the go-by for them. A number of light paper bags were provided, filled with such things as most touch the heart of childhood, raisins and nuts, candies and little cakes; one of them was suspended from an overhanging bough, and the young competitors were one by one blindfolded in front of it, turned three times around, and then furnished with a stick to knock down the prize. The wild, blind blows they struck in the air, created great fun for the little spectators, and when at last some lucky competitor broke the tempting paper, a great scramble after its contents would ensue, and he or she as the case might be, recovering once more the power of vision, would be rewarded with a smaller bag similar in contents, as the meed of honorable exertion.

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* "It is highly important that hops should not be picked before they are fully ripe, and *then* they should be gathered with as much expedition as possible. A hop may be considered ripe when it becomes hard and crisp to the touch; when the extreme petal projects, in a prominent manner, at the tip of the hop; when the color is changed from a light silvery green to a deep primrose or yellow; and when, on opening the flower, the cuticle of the seeds is of a purple color, and the kernel or seed itself hard, like a nut."—*Morton's Cyclopedia.*

But no little diversion was caused when in one or two instances the ruptured bag only rewarded the scramblers beneath it with a shower of *saw dust* for their pains. The evening was concluded for the company by a magic lantern exhibition in the cellar of a convenient barn, and later, for some friends of our host, by a hospitable supper within.

Among my recollections of Kent, not the least pleasant or enduring will be that of such an occasion as this —an occasion of thanksgiving and good cheer over the stacks of ripe corn which had risen high and broad from field to field—a re-union of employer and employed, equally interested in this result of their season's toil; and I could not but take it as a common acknowledgment of mutual services, and an ample witness of mutual good will. L. H. T.

Wheat and Chess.

We have received at different times several communications in favor of the transmutation of wheat to chess, the length of which precludes their publication in our columns. A notice of the chief points of their arguments may perhaps be sufficient.

One is from James J. Lord, of Woodbury, N. J. He states that he and his brother both sowed wheat in their gardens, in squares—that the next year it "all headed chess of the very rankest kind." We have known similar experiments, with similar results—yet proving nothing—in which there was seed enough in the soil to give a good crop of chess, and each square being hoed, as was the case with our correspondent's experiment, all the chess plants were destroyed, except near where each plant of wheat grew. The wheat being killed, there were enough chess plants left in its place to spring up and bear a crop[*] If our correspondent will make a calculation, he will find that enough seed of chess may exist in the soil for a plant at every square foot, (and rank plants will cover a yard,) and yet this seed will constitute but a *six-millionth* part of the bulk of the soil—rendering it impossible to detect its presence. We must add his polite invitation to John Johnston of Geneva, (who has not raised a bushel of chess on his large wheat farm in 30 years :) "John Johnston says he would like to see the man that raised chess from wheat. If he will come here he can see two of them. We should be glad to see him here for a week, if he chooses to stay so long. It is a pleasant part of the country."

Another is from L. Marbury of Glymont, Ohio, who states the following fact, which led him "instantly to the conclusion that wheat does turn to chess." A fifty acre field of wheat, when harvested, scattered enough grain to produce a partial crop the next year—after which a second sowing of wheat produced a crop wholly of chess. There was no chess in the first crop "to attract his attention," and he therefore thinks the wheat changed. We have on previous occasions stated the many ways by which the land may become imperceptibly seeded with it—and among others the fact that chess plants often grow only a few inches high, unperceived among wheat, yet scatter seed profusely over the ground—and also the fact which we have often observed, that in much seed wheat that is called "*perfectly clean*," we have found more seeds of chess for each bushel, than plants of luxuriant and spreading chess on a whole acre of dense growth of this weed. There are nearly two million seeds of chess to a bushel; we have seen a "dense growth" of chess at the rate of only 8000 plants per acre—the seeds of which would be less than a two hundredth part of ordinary seeding with wheat—a portion so small as to escape the notice of many eyes.

D. Clizbe, of Amsterdam, N. Y, who thinks that wheat does not often, but sometimes produces chess, says, "there are crosses, and a mixing of different classes and orders in the animal and vegetable kingdoms, such as squashes, melons, corn, &c.; take, for instance, corn—we have seen white sweet corn mixed with yellow Indian corn, which are as different as wheat and chess" Our correspondent will please excuse us if we say there is no analogy in the two cases. The mixing of squashes, corn and melons is only among *varieties*—not "classes," or "orders." Quadrupeds, birds, fishes, amphibia, &c., are different *classes*—crosses between which, as, for example, between a codfish and an elephant, or between a turkey and a tree-frog, are not to be expected. Wheat and chess are not *varieties*, but distinct *genera*, and a cross between them is quite as impossible as a cross between those distinct genera of the same order, the bat and the raccoon, the bear and the kangaroo, the magpie and the goldfinch, the pigeon and the peacock, or the pig and the zebra. But if crosses could occur in all these cases, they would not be parallel, for wheat and chess are not claimed to produce a *cross*, but one is asserted to change entirely, or make a clean leap over to the other—the same precisely as if it was claimed that a bat should bring forth raccoons, the bear young kangaroos, and the goldfinch lay peacock eggs.

Another correspondent suggests that chess may be "a mixture of oats or wheat, or rye with some of the grasses"—and he encloses seed of the sugar cane, broom corn, and a cross between them. We can only say that oats, wheat, and "the grasses," are entirely distinct genera, and according to analogy can never pass their own respective boundaries, any more than the animals above named; and also that there is no evidence that they ever do so—while the sugar cane and broom corn, if not merely varieties of the same species, are very closely allied and easily mixing species.

One correspondent, who states a supposed case of wheat turning to chess, adds, "seeing you and our old friend, John Johnston, of Geneva, are so fully established in the error of wheat not producing chess, I wish to put you right"—and then adds, "you need not send the five hundred dollars, I don't want that, but the truth" If he will look at our offer, he will perceive that this implied, although indistinct, claim of the premium, does not rest on the slightest foundation, as it was for a plant with distinct wheat and chess heads from the same root—not asserted, but *sent to us*. Although that offer stood several months, not a solitary plant was found in these thirty-two States of the Union, out of the millions that are claimed to be changing from wheat to chess, that could be caught half way to secure this rich prize during these hard times.

We have on former occasions, within a year or two, given many decisive proofs of the non-existence of transmutation; we shall only say at present that we have known a number of farmers in different parts of the northern States, who by continued care year after year have succeeded in extirpating this troublesome weed, not only from their crops, but from their land, so that when their wheat is winter-killed, no chess ever springs up and spreads abroad, and grows luxuriantly to supply its place. Why should wheat never turn to chess on such farms?

☞ Sold on the Show grounds of the Susquehannah Valley Ag Society, at Unadilla, Sept. 16, 1859, where he received the first prize and the sweepstakes diploma, as the best animal exhibited in his class, the beautiful roan Short-Horn bull "Nutmeg," vol. iv, A. H. Book. This young bull was bred by F. M Rotch, of Morris, but lately owned and sold by Joseph Juliand, 2d, Bainbridge, Chenango Co., to Allen Scrambling & Brothers, Oneonta, N. Y

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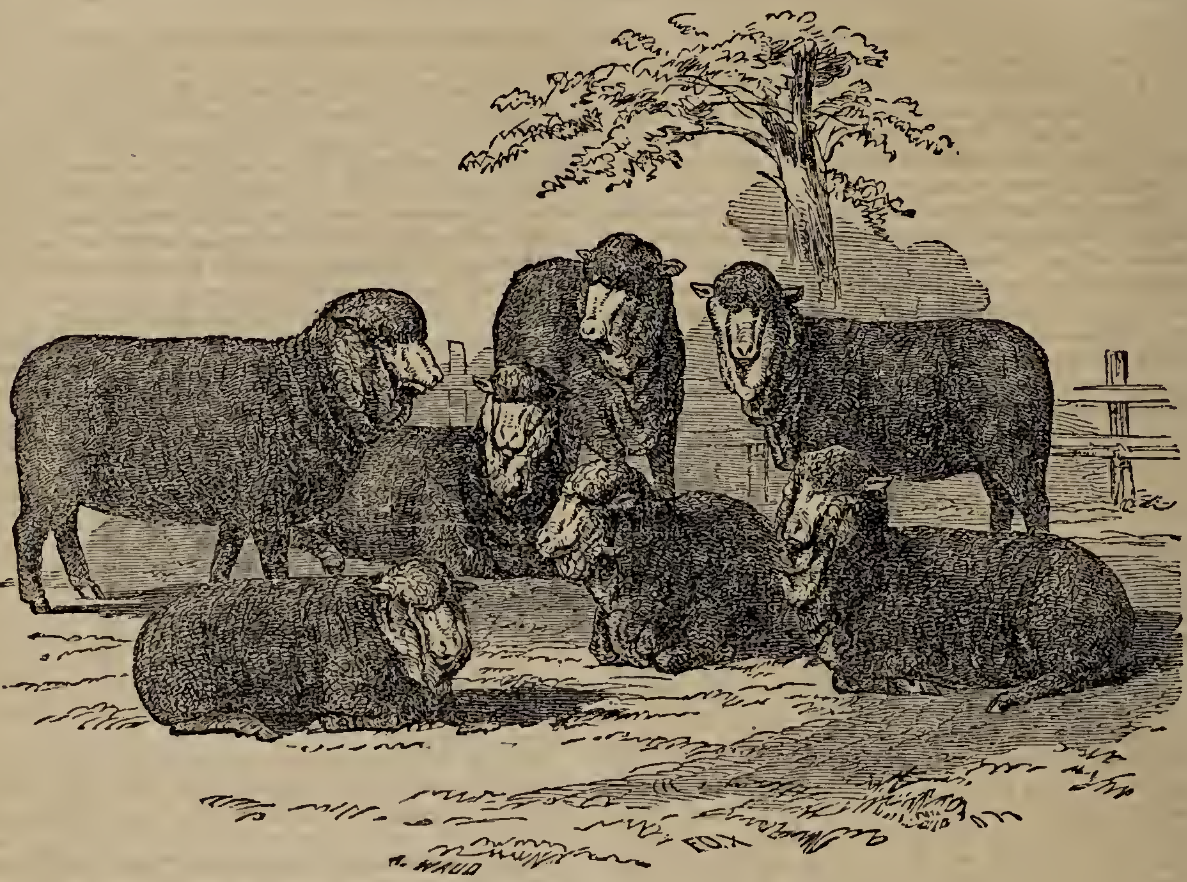
[*] We refer our correspondent to the statement we published a year or two since, of a similar attempt, but conducted *with greater care*, under the auspices of the N. Y. State Ag. Society, by four different persons, one of them a firm believer in transmutation. All failed entirely to produce any chess from wheat, and the hundred dollar prize at stake was not awarded.



Spanish Merino Ewes.

Bred by and the property of George Campbell *of West-Westminster, Vt.*

American Grapes.

We have received from Samuel Miller of Lebanon, Pa., a box of several of the newer American Grapes, some of which have of late years excited much interest. We give their names, with remarks on their appearance and quality. Some of them are the first year's bearing, under "ordinary culture," and of course they do not come up to the larger size resulting from the most luxuriant growth.

Union Village—Bunch 5 inches long, not shouldered, berries large, seven-eighths of an inch in diameter —dark brownish black—much resembling the Isabella in flavor, hardly so good perhaps—nearly round. We should like to know the exact period of ripening

Mary Ann.—Bunch small, berries half an inch in diameter, black,—probably very early; flavor good, equal to Isabella, sweet, perceptibly foxy, but not disagreeable. S. Miller says, "hardy and immensely productive."

Concord—Fair specimens of this well known sort.

Brincklé—Bunch large, about 8 inches long, rather loose, shouldered; berries five-eighths of an inch in diameter, round, black; skin rather thick, no pulp, flavor sweet and excellent—decidedly superior to Isabella. Has much of the delicacy of foreign grapes—is it hardy?

Perkins—Resembles Northern Muscadine, a finer color, but scarcely equal to it in flavor. The specimens of Northern Muscadine had fermented or decayed.

Hartford Prolific--Bunch 5½ inches long, shouldered moderately compact; berries five-eighths of an inch in diameter, globular, black—moderately good, slightly foxy, better than Northern Muscadine, and is probably quite as early.

Cassady.—Bunch of medium size, 4 or 5 inches long, slightly shouldered, moderately compact; berries half an inch to five-eighths in diameter, light green, sometimes a faint shade of salmon; sweet, scarcely foxy, with much pulp, rather deficient in flavor. Downing says "very good," and S. Miller, "sweet as honey, with a peculiar and delightful aroma." Tastes differ, and we cannot place it so high in the scale of excellence.

Lenoir.—Bunch scarcely shouldered, 4 inches long, rather compact; berries rather small, or three-eighths to one-half an inch in diameter, with a rather brisk and quite high flavor—"good" or "very good"

Franklin.—A small, broad, shouldered bunch, compact and even—berries half an inch or more in diameter, round black, apparently thoroughly ripened, and hence an early sort. Quality "good," perhaps "very good." There is a perceptibly brisk flavor, a very slight shade of the acerb quality of the frost grape.

"*Delaware Burgundy*"—is evidently an exotic—is it not Miller's Burgundy?

Raabe.—Bunches 4½ inches long, rather loose, slightly shouldered; berries less than half an inch in diameter, dark reddish brown, very sweet. juicy, very little if any pulp, quality "very good" if not "best."

Delaware—fair specimens of this excellent grape.

Profits of Bees.

Eds. Cult. & Co. Gent—The Sept. No. of The Cultivator, contains a statement by Mr. Geo. Gebhart, of Union City, Ind., that "he made $150 clear profit on eighteen stands of Bees the last season, kept in common hives."

I will give you a statement of the profits of my Bees, which is far better than the above.

I commenced the season with 130 stands—have taken off 1,000 glass boxes, well filled, weighing 6,000 lbs., which at 20 cents a pound amounts to $1,200. My increase of stock is 170—all good to winter, worth at least $4 each, $680; making the aggregate of $1,880, or an average of $14.46 for each old stock, which is $6.13 better than Mr. Gebhart. He will have to try again. I use Miner's form of Bee-Hive, with a partition board instead of the cross bar, and consider it the most convenient and best I have yet seen. A. W. Ford. *Middleville, N. Y., Oct. 3.*

Inquiries and Answers.

Bone-dust for Wheat.—*H*, *Western New-York.* The phosphate of lime, taken from the soil, to supply this ingredient as a component part of the wheat crop, must be ultimately replaced to the soil. It is a curious fact, however, that analysis has failed to a great degree in indicating when it is needed. Dr. Emmons states in his Report, that ordinary analysis did not even show a trace of phosphate in the Wheatland soil, one of the best for wheat in the world, and which had for many years produced heavy successive crops. A subsequent and more careful analysis showed a minute portion—enough however for an ample supply. The statement of the "manager" of a certain "professor," of a great crop by manuring with superphosphate, needs authentication We have however known larger crops without the superphosphate. This manure has often produced excellent results, and at other times none at all. What we want is more careful and accurate experiment, and less of ignorant theorizing.

Culture of Trees, Raising Hedges, &c.—"*Amateur*," *New Brunswick.* In cultivating his orchard, now set two years, our correspondent should bear in mind that the roots will soon extend on each side of the tree a distance equal to the hight of the branches; that is, if the trees are now eight feet high, there should be a clear and mellow surface of soil sixteen feet in diameter about each. If he does not wish to cultivate the whole surface, he may work a strip of land a rod wide, in the center of which each row of trees will stand, which will leave a strip of uncultivated land between, about fourteen feet wide. We should prefer cultivating the whole—which might be planted with potatoes, turnips, or beans—or any low crop which is kept cultivated through the summer. For broadcast culture, Shares' Harrow, described in the Illustrated Register for 1860, is an excellent implement,—especially so, as it will never tear up roots. For one-horse culture, we would particularly recommend Alden's Thill-cultivator, as being not only very efficient, but more easily controlled in depth or distance than any other implement of the kind we have tried. The cracked plum-pits, if fresh and plump when planted, and if planted very early as they should be, may have rotted in too wet or undrained a soil, or shriveled and dried in too dry one—our correspondent may be able to judge on this point. If neither, then the pits probably still remain good in the soil, and may start another spring. The same remarks will apply to the seeds of the native thorn. The latter, however, most usually remain dormant the first summer, and grow the second spring.

Green Crops for Manure.—I have a five-acre lot too far from home to cart manure—what do you think of sowing buckwheat in May, plowing in in July, then sowing another crop and plowing that in—would it not be better than clover? F. B. *Godwinville, N. J.* [We have no accurate and reliable experiments to show the comparative value or profits of green manuring with buckwheat and with clover. An advantage of the former is that two crops a year may be plowed in. Clover affords heavier crops, and the roots are a large addition—but it costs more in seeding, and requires more time. The practice in many places is to cut the first crop of clover and plow in the second The mode of manuring with buckwheat proposed by our correspondent would be a good one; but in all cases of plowing in green crops, we like to add some yard manure, and a portion of ashes is usually a valuable addition. Green crops do not always produce equal benefits; as for example where there is already much vegetable matter in the soil, their effects are less beneficial.]

Burying Buds in Winter.—Can you or some of your correspondents, tell me if it will injure the newly inserted buds on quince stocks, to throw a furrow against them sufficiently high to cover the buds two or three inches? In my case I am afraid the rabbits will gnaw them or eat them off. Also whether buds that have started this fall, and are in various stages of growth, will be ruined by the winter so they will not start in the spring? I think by banking up the earth some buds may be prevented from freezing out. D. O. Reader. [Should the soil continue quite dry through winter, banking would not injure—but when wet, we have known the buds to rot by being thus long covered with a very wet soil. The young growth from summer buds is apt to perish by winter's cold—hence the reason that pears are usually budded quite late in the summer—to prevent growing till spring. We would recommend experiment on a small scale.]

Flooding Cranberry Plants in Winter.—Can you inform me if cranberry plants will thrive if covered with water through the winter, as I have a field of a number of acres which I design for them in the spring, *and I use the same field* for an ice pond in the winter? John B. Knapp. *Richmond Hill.* [We have been informed that a winter flooding, withdrawn early in spring, is a good protection against freezing · especially for newly set plantations—will some successful cranberry raiser please inform us, from his own experience, if this information is correct?]

Bone Manure.—*O. B.*, *Jefferson Co, Ky.* Bone manure, if merely ground, should be applied at the rate of half a ton or more per acre, for the different crops—if dissolved in sulphuric acid, so as to form a superphosphate of lime, five or six hundred pounds are sufficient. If about half the usual quantity of yard manure is applied at the same time, a greater benefit will result, than if the bone manure is applied alone, and in larger quantity. It should be well mixed with the upper soil by harrowing.

Peach on the Plum Stock.—Please inform me whether grafting the peach on Canada plum, will keep it back to save from late spring frosts, and if so, where can they be obtained and at what price? L. F. Dillaway. [We do not think any decided or even perceptible results will be produced by working on the wild plum, in retarding the growth in spring.]

Protecting and Ripening Strawberries.—If strawberry plants are covered with cornstalks and leaves, will they be sufficiently protected during winter? Some of your correspondents say the Wilson's Albany strawberry should not be eaten until *fully ripe.* From what they say, I judge the indications of ripeness are not the same in this as in other seedlings. How are we know when "just the nick of time" arrives? *Hill-side, N. B.* [Cornstalks and leaves will no doubt afford ample protection, provided they do not become so matted down by moisture, upon the plants, as to cause them to rot. Leaves would probably be better in this respect than corn-stalks, as they have more elasticity when wet. A little brush laid on first would perhaps be an improvement, and a coating of evergreen boughs would undoubtedly be still better.

The best way to ascertain if strawberries are fully ripe, is to allow them to remain on the plants as long as they continue to improve in flavor, and no longer after they begin to deteriorate. A little observation will enable one thus to know from the color the exact point of proper maturity.

Spavin, &c.—I have a five years old mare that has been a little lame for four or five months, with what appears to be a spavin. Is it advisable to use a beast in that condition? Is there any remedy for the disease? At what age is it advisable for heifers to "come in?" What is the practice of the best herdsmen? R. N

Destroying Alders.—One of your correspondents some weeks back inquired for means of destroying alders. I will report some of my experience on the subject. Many years since (some 20 or 25) I had on the north end of my meadow a large patch of them. Late in the fall, probably in or near November, I undertook to get rid of them; and I cut them out close to, or rather into the ground, with the view of mowing close without danger of hitting the stumps with the scythe. The next spring they came up, a perfect thicket of them. I did not disturb them till I had finished haying—I suppose somewhere in the early part of August, when I directed one of my men, a careful, good hand, to take his scythe and cut them down close to the ground. He did so, and there has not appeared a shoot of them from that time till now, nor is it likely there ever will. W. T. L.

Keeping Potatoes.—Which is the better method of preserving potatoes through the winter—in a good dry cellar, or pits in the ground? By giving your opinion, and the reasons therefor, you will oblige W. F. [A cool cellar, which never freezes, is the best and most convenient place for keeping potatoes. They may be placed in large boxes or bins, raised from the ground. If rotting is feared, the bottom of the box should be made of slats, to admit of ventilation—otherwise this will not be necessary. They should be covered from the light, for which purpose chaff is a good substance. If buried in pits, the subsoil should of course have perfect drainage. We prefer heaps above ground, containing 50 to 100 bushels, to be covered with a foot of packed straw, and three or four inches of earth on the straw. This has been found much better than less straw and more earth. There should be ventilating holes at the top, loosely stopped with straw. The decayed potatoes often found at the top of the heap, when potatoes are buried in heaps, result from a want of ventilation. The advantage of keeping in good cellars, over this mode of preserving in heaps, is the saving of abor.]

Southern Grasses.—Enclosed you will find three kinds of grass, all growing wild on my farm on the border of the French Broad river. What names are they known by? Nos. 1 and 2 stand straight between four and five feet high—No. 3 is inclined to lie down, but when straightened up is quite as tall as Nos. 1 and 2. They were plucked Sept. 15, 1859. F. W. J. *Henderson Co., North Carolina.* [The specimens sent, being only portions, and imperfectly preserved, do not afford us a perfect opportunity of determining the names: No. 1 appears to be *Cinna arundinacea*, which Muhlenberg says makes good fodder. Elliott does not describe it in his Southern Botany. No. 2 is *Bromus pubescens*—a different species, but the same genus as chess or cheat. No. 3 is *Muhlenbergia mexicana*,—rather a poor pasture grass.]

Lolium or Rye Grass.—I send you enclosed a plant altogether unknown to farmers in this vicinity. It was given to me by Mr. Abram Bellows of Glen, Montgomery Co., who found a number of stalks like it growing among his spring wheat. I have shown it to many of our farmers, but none of them ever saw or heard of such a plant. This specimen had been laying a long time on the ground before I saw it, consequently some of its characteristics were absent. J. C. Taylor. *Glen, N. Y., Sept*, 1859. [The plant is the *Lolium perenne*, or Rye Grass—an introduced plant—which has been sometimes highly recommended for pasture, but of the real value of which we are unable to speak.]

Space between Hedges and Fruit Trees.—I am surrounding a kitchen garden with an evergreen hedge or screen, composed of Hemlock and Norway spruces. In the border inside, I wish to plant dwarf fruit trees, pears, apples, cherries, peaches, &c. How near to the hedge may I plant them without their being injured by the roots of the evergreens? Please inform me through your instructive and interesting pages, and oblige A Constant Reader. *Stockbridge, Mass.* [Allowance should be made for the growth of the screen, according to the treatment it is to receive. If allowed to grow pretty freely, both the tops and roots will spread more than if kept closely sheared. The roots of fruit trees, as a general rule, extend *each way* at least equal to the height of the tree—and evergreens do nearly the same. Hence, to prevent *all interference* of roots the space should be two or three rods—this, however may be regarded as impracticable, neither is it necessary, for no detriment will result from some intermingling, especially if the roots on the opposite side have an unlimited range in good cultivated soil. There should be perhaps a space of at least one rod, which will allow room for cultivation, gathering fruit, extension of branches, &c]

☞ Will you publish a brief outline of a constitution and by-laws for a "Farmer's Conversational Society?" R. [Will some of our correspondents who have had experience in the management of such a Society, please favor us with the desired information?]

"Stripping."—In some portions of the west it is the practice for the milkers to return to the cow a short time after milking, and *strip* what remains or has accumulated in the udder. Is the custom advisable? Please give the reasons pro or con, in the Cultivator, and oblige M. B. L. *Salem, N. J.* [We hope some of our dairymen will answer this inquiry.]

Seed Corn.—In regard to planting seed corn, we find in the N. H. Journal of Agriculture the statement of an experienced farmer, who says that seed from the butt end of an ear of corn will ripen its products all at the same time, and nearly three weeks earlier than seed from the small end of the same ear. He also recommends for farmers to break the ears in two in the middle, and plant only the seed from the butt end of the ear. Have any of our readers had experience in this matter?

Thick and Thin Sowing Again.—"How comes it" that a small quantity of seed requires to be thinly sown to produce the greatest yield, when say five bushels or more must be sown thick to produce the same result? Those that have any experience, know that a few ounces of wheat planted at the rate of a peck to the acre, will produce more wheat than to crowd the same seed on a few square inches. Then why is it that we hear men advocate the necessity of sowing two bushels or more to the acre? D. S. *Pennsville, Pa.*

Fence Posts.—I have cut the following from the N. Y. Christian Advocate and Journal:—"Vitriol and Fence Posts.—Of the many methods of preserving fence posts from decay, none is perhaps more simple and cheap than the one of soaking them in blue vitriol. At a recent meeting of the Farmers' Club, in Hudson, N. Y., one of the members exhibited a post soaked in a solution of blue vitriol—1 lb. of vitriol being used to twenty quarts of water. The post was pine, and when taken up was as sound as when first put down eight years since. This solution is good for all kinds of timber exposed to the weather—spouts, shingles, stakes, bean-poles, etc." It would afford me pleasure to learn the size of the post—how much of it, and how long it was soaked—the temperature of the solution, and how much of it was used. I have on hand a number of tamarack posts about five inches square, sawed over a year ago, and my object in making the inquiry is to learn of some cheap remedy that I can adopt to render them durable after they are set in the ground; and I would make it through your paper, for the reason that I think it will perhaps be more likely to meet the eye of the individual who made the above experiment, and also attract the attention of others who are able to give valuable information relative to similar experiments. D. G. Williams. *East Dorset, Vt* [We shall be glad to hear from any one who has tried the experiment above referred to, but our correspondent will find directions for soaking posts in a solution of blue vitriol in the Country Gentleman of June 16, 1859, p. 384.]

Egyptian Wheat.—Could you inform me in the Gentleman, where I could get the seed of Egyptian Wheat. I brought a few seeds with me from Providence, R. I., two years ago, and raised it in my garden until it got nearly ripe, when cattle broke in and destroyed it all. I cannot find a seed of it anywhere. It looks just like corn when growing. The seed comes from the top as soon as it gets its full length. It bends down when the seed comes out of the stalk, and looks some like sugar cane seed, only larger. Jas. Monroe.

Notices of New Books.

PEAT, MUCK AND COMMERCIAL MANURES.—Under this title the Reports submitted to the Connecticut State Agricultural Society during the years 1857-8, by their Chemist, Prof. S. W. JOHNSON of Yale College, have been issued, and are for sale in a handsome volume by Brown & Gross of Hartford Ct., [price 75 cents.] It comprehends the analytical results obtained on the following fertilizers:—

Peruvian Guanos,	4	Superphosphates,	20
Pacific Ocean Guanos,	2	Columbian Guanos,	5
Ichaboe Guano,	1	Poudrettes,	4
Baker's Island Guano,	1	Cotton Seed Cake,	1
Miscellaneous,	5		

The analyses of these 43 samples have been made with great care, and are elucidated by an explanation of the chemical as well as the general bearings of the subject. We need scarcely say that the results of Prof. J.'s labors are of deep interest in every State where artificial manures are employed, although primarily intended for the benefit of Connecticut farmers. There is in fact scarcely anything of greater importance now, either at north or south, than to establish some such safeguards against fraud and deception in the manufacture and sale of manures, as the Ag. Society of that State have provided by securing the reports before us. More than a moiety of the volume is occupied with an Essay on the nature and agricultural uses of Peat and Muck, comprising moreover 33 analyses—a part by no means calculated to be less useful than that preceding it, and we can commend the whole to our readers with every confidence in the soundness of its teachings, and in the strict integrity of purpose with which its investigations have been conducted.

FLINT'S GRASSES AND FORAGE PLANTS.—A new edition of this work—the fourth—is now ready, containing some additions and wholly re-set in uniformity of style with the "Milch Cows" of the same author. We have seen no reason to change our opinion—already expressed—of the value of this work. [Price, $1 25.]

THE THIRD VOL. OF THE AMERICAN DEVON HERD BOOK may now be had from the Editor, Mr. SANFORD HOWARD, of Boston. It contains 258 pedigrees of males, 399 of females, and portraits of Mr. FAILE'S cow "Jenny," imported, Mr. WENTWORTH'S bull "Puritan," bred by Col. L. G. Morris, and Mr. LINSLEY'S cow "Fairy," imported. Owners of Devons will find it undoubtedly a matter of interest to yield this publication all the support in their power.

The Connecticut State Fair.

This exhibition took place week before last at New Haven; the show a good one, the weather favorable, the attendance large, and the results, so far as we learn them, generally satisfactory. We notice the names of the following exhibitors of stock, as having received various prizes:—Thomas Cowles, Farmington: A. H. Beach, Merwinsville; T. A. Mead, Greenwich; L. Birdsey, Meriden; P. B. Tyler, West Haven, and John Giles, Woodstock, in Short Horns—L. A. Thrall, Torrington; Linsley Brothers, West Meriden; B. H. Andrews, Waterbury; James A. Bill, Lyme; David Beecher, Huntington; D. W. Grant, Bloomfield; Stanley Griswold, Torringford; James J. Webb, Hamden; N. B. Smith, Woodbury; Levi Coe, Middletown; John and H. Tillotson, Farmington; S. & L. Hurlburt, Winchester; Stephen Atwood and Joseph M. Munson, Watertown, in Devons—John Giles, in Ayrshires and Alderneys—Donald G. Mitchell, New Haven, and Dr. E Bentley, Norwich, in Alderneys. The exhibition of grades, both of Short Horn and Devon blood, and of "Natives," appears to have been large; that of Steers and Working Oxen, in no less than six different classes, must have been very fine; the miscellaneous part of the show attractive in extent and character. Three evenings were spent in Agricultural discussion, in one of which the project of popular lectures at Yale College, on Agricultural subjects, during February next, was broached, as referred to in our last number; it seemed to elicit general approval, and we understand that numerous names were received for tickets.

Mowers and Reapers.

MESSRS. L. TUCKER & SON—I am tempted to purchase a Reaper and Mower, *combined;* but my ignorance of all connected with them is a difficulty. In the first place, would I be justified in the expense, in cutting from 50 to 100 acres grain, and say 20 or 30 in crab-grass hay? And then what preparation does the land demand, above cutting with cradle? And in the last place and most important, if the land is well prepared, is the selecting of the proper machine. There are many patents, and *all* claim to *be best*, or equal to best, and though I have tried to notice closely what has been said in THE CULTIVATOR in favor of different patents, yet I am and would be at a loss to make a selection. You will greatly oblige me if you will give me the information I need in selecting the best for cutting wheat, oats, rye, and crab-grass hay. B. HOLMES. *DeKalb, Miss.*

The cost of a good combined mower and reaper would be probably saved yearly on a farm with the extent of grass and grain named by our correspondent.

There are several combined machines which have established a good reputation. Quite as much depends on the manufacturer as on the inventor. An ingeniously constructed machine may be made of bad materials, with badly made gearing, and work poorly. Another with less merits as an invention may be manufactured by a skillful workman, and far exceed the former in value. Among those which stand high in reputation, are Wood's Improvement of Manny, the Buckeye mower and reaper, Kirby's, and several others little if any inferior to them. Different farmers have their several favorites, showing their near equality of merits. To manage and keep a mower and reaper in good cutting order, it is necessary that it be in the hands of a person of some mechanical skill. The best machines have been spoiled when used for a length of time by ignorant and careless workmen. Any man of ordinary capacity, will in a short time, by care and attention, acquire sufficient skill to keep one in good order.

The land should be tolerably smooth, and free from stone. If intersected with furrows, they will interfere with the progress of the reaper, but may be passed with care; and although stone cannot dull a well-made machine properly protected with fingers, they may cause breakage or permanent injury.

Chester County, Pa., Fair.

The *Village Record*, published at Westchester, says of this exhibition:

> It was a most triumphant affair. In the quantity and variety of articles on exhibition—the good arrangement of every department—and the number of people in attendance, it was very far superior to any exhibition ever held in Chester county. Indeed most intelligent gentlemen familiar with the history and progress of Agricultural Societies, very freely express their opinion that it was unrivalled by any County Exhibition ever held in the United States.
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> The receipts of the Fair were about $2000, far greater than at any former Fair. There were entered for exhibition 130 horses, 170 head of cattle, 101 sheep, 111 swine, 36 loaves of bread, 189 glasses of jellies, and 185 of preserves, and a many-headed monster team of oxen—and several teams of mammoth horses. We congratulate the Society, Managers, Committees, and all others belonging to and participating in the exhibition, upon the honor they have reflected upon themselves, and the farming interests of good old Chester county.

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The receipts of the St. Louis Fair are said to have amounted to $50,000.

Notes for the Month.

N. Y. State Ag. College.—We noticed briefly in our last, the appointment of Major Patrick to the Presidency of this Institution. We are favored with a copy of the following letter of acceptance:

Ovid, 23d Sept., 1859.

My Dear Sir—Permit me, through you, to express to the Board over which you preside, my high appreciation of the honor they have conferred on me by placing my name at the head of the Faculty of their College.

The many expressions of fraternal regard from Trustees individually, joined to the unanimity and heartiness of their action as a Board, leave me no room to doubt my duty as to the acceptance of the office to which they have called me, however much I may tremble in view of the responsibilities incurred by such acceptance.

That our joint efforts in this vast field of labor may be crowned with the happiest results to our children and those who shall follow us, is the earnest hope and prayer of your friend and servant, M. R. PATRICK.

Hon. John A. King, LL.D.,
Presid't Board of Trustees, N. Y. State Ag. Col.

For several years past Major P. has been the efficient General Superintendent of our State Society's Fairs, and has shown in this position a degree of executive ability which will be of important service to the institution over which he is now to preside. Educated at West Point, he will carry with him to his new post a knowledge of the most thorough educational system in our country, and possessing in addition, as he does, experience in Agricultural matters, and an unusual degree of sound, practical *common sense*, we hope to see the College rise under his guidance to the high position it *should* occupy. Both from our public acquaintance with him, as well as from personal friendship, we are glad to take this opportunity of presenting our congratulations to the Trustees, and of wishing the President every success in his new avocation.

Agricultural Education—A New and Promising Idea.—We shall look forward with much interest to the completion of arrangements now under way and nearly concluded, to attract the attention in a new mode, of farmers and farmers' sons, to instruction in all the various branches of Agricultural and Horticultural improvement. It is proposed, under the auspices of the Scientific Department in Yale College, to hold at New-Haven, Conn., during the month of February next, an extended series of lectures, in courses numbering from three to five, embracing a most comprehensive range of subjects, and with the assistance upon each of the highest practical and theoretical ability to be obtained. Several lectures will be given during the day, as in a school of Law or Medicine, and the evenings will be mainly devoted to discussion. The whole programme, it is anticipated, will comprise from eighty to a hundred lectures, for all of which the fee will be only $10. The aid of twenty or more gentlemen, residing in five or six different States, prominent as agriculturists, horticulturists, stock breeders, &c., has been secured, and we shall soon be able to publish complete details, with names and subjects. By enlisting so many leading minds and compressing so much into a single month, the attention of experienced agriculturists and horticulturists, not less than that of the young and enterprising, can hardly fail to be attracted, and there seems to be every prospect not only of a large gathering at the time, but also that the subsequent results of the instruction given must be lastingly profitable to its recipients.

Changing Seed-Potatoes.—In regard to the statement "that a farmer increased his potato crop from fifty to one hundred per cent., by obtaining potatoes for seed raised at a distance and on different soil," the *Boston Cultivator* remarks, "If so, his first variety must have been very poor. As good potatoes as we ever saw grown, were raised from seed that had been used successively for twenty-five years. We recollect two facts of this kind."

Acknowledgments.—Our thanks are due to D. S Heffron, Utica, for a handsome sample of Child's Superb Grapes—to M. Quinby, St. Johnsville, for a box his superior honey—to E. Ware Sylvester, Lyons, for a dozen Seedling Apples, which originated on his place, and are known as the *Sylvester Seedling;* a very beautiful and excellent autumn apple—to T. S. Clarkson, Tivoli, for samples of the Prince Albert Potato, equal to any we have ever seen—to O. H. Osborne, Watervliet, for a Maiden's Blush Apple, from Missouri, of extraordinary size and beauty.

W. C. Durant, Esq., of this city, who showed the prize assortment of Hot House Grapes at the Fair last week, arranged in a large and beautiful case, making one of the handsomest displays we remember to have seen, will accept our thanks for fine clusters of each of the following sorts:—Black Hamburgh (one weighing nearly two pounds,) Victoria, Muscat of Alexandria and Royal Muscadine.

Fruits Hardy in Maine.—J. W. Adams of Portland, a successful cultivator, informs us that he has found the following kinds of the pear to endure well the winters of that region.

The *Urbaniste* he finds the hardiest; the *Beurre d' Amalis* next; and the *Flemish Beauty*, *Onondaga* and *Winkfield*, nearly as hardy.

He finds the *Ramsdell's Sweet* the hardiest apple, and the *Red Astrachan* and *Hurlburt* nearly as much so.

S. L. Goodale of Saco, finds the following among the hardiest apples:—*Red Astrachan*, *Duchess of Oldenburgh*, *Rambour d'ete*, *Winthrop Greening*, *Autumn Strawberry*, *Wood's Sweet*, *Golden Sweet*, *Aunt Hannah* and *Northern Spy*—the latter, however, proving unproductive. The hardiest *pears* with him are, *Rostiezer*, *Dearborn's Seedling*, *Beurre d' Anjou*, *Flemish Beauty* and *Doyenne Boussock* on pear. *Autumn Paradise* and *Ananas d'ete* are rather hardy; *Winkfield* moderately so; *Beurre Bosc*, as elsewhere, quite tender. The Seckel does not succeed, simply because the tree will make no growth.

The Washington Pear.—We believe the merits of this variety are not sufficiently appreciated. The tree is a handsome grower, and a great and early bearer—and the fruit is of excellent quality, sweet, aromatic, juicy, and only lacking the melting texture of some of the celebrated varieties which are inferior to it in high flavor. A tree of this variety was planted fifteen years since on the grounds now occupied by E. W. Herendeen of Macedon, N. Y., on a stony and rather sterile knoll, where it could not be properly cultivated. It grows well, has never blighted, and bears large annual crops. On a recent visit, we found it bending under its load of fair and handsome fruit, the crop of which was estimated at two barrels.

Late-ripening Raspberries.—F. Adams of Middlebury, Ohio, has sent us specimens of what he calls Hudson River Red Antwerp, consisting of an autumn crop, a small portion ripe, the rest green. He states that the spring crop was cut off by the "big frost," which is probably the reason of the production of this second crop. The specimen sent is the genuine sort, so far as we can perceive from a single shoot, much dried and shrivelled, which is hardly sufficient to enable one to recognize it with certainty.

Superb Isabella Grapes.—Dr. H. H. Farley of Union Springs, has presented us with a box of grapes from his beautiful and fertile peninsula in Cayuga Lake. Our readers may judge of the skill of the cultivator as well as the natural advantages of the locality, when we inform them that several of the berries measured fully *fifteen-sixteenths* of an inch in diameter, and that one bunch weighed a pound. There was no ringing of the vine, nor unusual treatment. The crop this year is small, from the severity of last winter. Dr. Farley informs us that laying down the vines at the commencement of winter would undoubtedly have given him at least two thousand dollars in the increased crop.

An Accurate and Reliable "Man of Science."—A recent number of the *New-England Farmer* contains an article from an Associate Editor, in which the writer manifests what we have once or twice before noticed with much regret, a singular willingness to give the endorsement of that journal and of his own reputation, to a man whose scientific standing, to say the very least, rests under the shadow of many unpleasant suspicions. In writing one's name upon the back of a note, it is well to investigate rather thoroughly the solvency of its maker, but still greater caution is surely required in vouching for scientific soundness where open accusations of charlatanry have never been refuted, and where not only the *personal responsibility of the endorser*, but also the interests of the whole agricultural public are so deeply concerned. In the present instance, the endorsement strikes one as the more exceptional, because the article previously quotes without particular remark from an English authority confessedly without a superior in Agricultural Science; while it carefully reserves every expression of confidence for scientific "reliability" and "accuracy," and all its praises of "scientific knowledge," to bestow them —we should almost suspect ironically—where both the knowledge itself and the honesty to use any knowledge rightly, must be regarded as standing in an uncommonly equivocal light.

Bucks Co. (Pa.) Fair.—The Annual Fair of Bucks county was held at Newtown on the 12th and 13th Oct., and was, as we learn, very successful in every respect. There was great competition for the Butter Premiums, for which there were 78 entries. The regular Address was given by Senator David Taggart of Northumberland county, followed by an off-hand talk by Horace Greeley of New-York. There could not have been less than ten thousand persons present, and a crowd evincing more substantial thrift, intelligence, and comfort generally diffused, could hardly have been gathered anywhere. The crops of Bucks county for 1859 are most ample—fruit probably excepted—and she has a large breadth of wheat sown, which promises a generous harvest next year.

The N. Y. State Fair.—The Editor of the *Boston Cultivator* speaks in the following terms of our recent Exhibition in this city :—

> "It has been the fortune of the writer to attend most of the shows of this Society for the past fifteen years, and also to attend similar exhibitions in many parts of the country. Comparing this with any other display of the Society, or any other association in America, we have no hesitation in saying that it exceeds all we have attended. It may be that some parts of other exhibitions have been equal or superior to the same parts of this, but on a general comparison we presume this is unequalled."

The *Rural New-Yorker* thinks that the Society

> "never so fully demonstrated its superiority, or achieved such marked success, as during the holding and in the results of its Nineteenth Annual Exhibition."

"Terraculture" — Terracultor Comstock has been lecturing at Pittsburgh, Pa., where his effrontery does not appear to have met with its usual success. The County Ag. Society appointed a committee to attend his lectures on terraculture, who were to report their views upon the subject to the society. The committee consisted of Messrs. James S. Negly and John Murdock, and Solomon Schoyer, Esq. In their report, which comes to us in the *Pittsburg Dispatch*, the "professor" is handled "without mittens." In conclusion, a committee consisting of Messrs. Reed, Snodgrass and Captain Young, was appointed to take into consideration the propriety of prosecuting Professor Comstock for obtaining money under false pretences. We have laid aside the report for publication as soon as we can make room for it, as it gives a better view of the professor's pretensions than we have before seen.

Prolific Buckwheat.—An Ohio farmer selected two stalks of buckwheat from his crop this season, and counted the grains—the first numbered 1,109, the second 1,321. He says he was satisfied with the crop, and counted no farther.

The Annual Register for 1860—In calling attention to the Advertisement of this work in another column, we have only room to mention that it possesses some additional features of attraction over preceding Numbers; orders may be immediately sent in, and we shall supply them, as they come, as rapidly as possible. The Annual Register contains no less than One Hundred and Seventy-Six Illustrations, and in their character, and the value of the accompanying matter. it is certainly not inferior, we think we may safely say, to any book ever issued at its price. [Single copies sent by mail postpaid, for 25 cents. Address the office of this paper]

Cotswold and Leicester Sheep.—Mr. John Snell of Edmonton, Canada West, exhibited at our State Fair last week, a lot of long-wooled sheep, which we have rarely seen equalled. Among them were a Leicester ram, three years old, weighing 367 lbs., and two Cotswold rams, two years old, weighing, one 303 lbs., and the other 390 lbs. The last was purchased by Mr Wm. Reybold of Delaware City, Del., at a high figure.

Niagara Co. Tile Works.—The multiplication of establishments for the manufacture of Drain Tile argues well for the improvement of our agriculture, and we are pleased to see in that capital grain and fruit county—Niagara—new Tile works in operation. Read, Mickle & Co., of Lockport, are experienced workmen, and we saw at their yards all kinds of Sole and Horse-shoe Tile of full length and the best quality.

New Pears—The pears from J S. Negley of Pittsburgh, came to hand in good condition, and appear to be a fine variety. They are full medium in size, obovate-pyramidal, smooth and handsome, some of them with a fine crimson cheek, and the flavor is perhaps as high as "very good" on the scale of the American Pomological Society. We are not informed as to their productiveness nor growth.

Value of Corn Fodder.—Cornstalks cut up at the root and well cured, have been estimated as worth from one-third to one-fourth their weight in hay, and another estimate places the product of forage from an acre in corn as equal to the hay from an acre, and often more valuable. We have never seen any statement of the product in tons of an acre of corn; if any of our readers have weighed the dried fodder, we should be pleased to publish the result.

Rutland Co (Vt.) Fair.—This was held the first week in October at Rutland, and passed off to the entire satisfaction of all who were present. A Festival was held at the Town Hall, when speeches were made by Hon. S. Foot, Rev. Mr. Rusted, J. G. Lane, Judge Aldlis, Hon. J. P. Hale of N. H., and others.

Pears in Maine.—S. L. Goodale of Saco writes, in speaking of the exhibition at that place, "I wish you could see the fruit in town to-day. Duchesse d'Angouleme 10 to 13 ounces, Clairgeau, 8 to 12 ounces, and others in proportion."

Fairfield Co. (Conn.) Fair.—Our Fair was held last week with a most complete success, the receipts amounting to upwards of $1,600. Edwin Hoyt.

Prince Albert Potatoes.—To-day myself and nephew dug 40 bushels of the above variety on fourteen rods of ground, varying in size and length from two inches to nine and a quarter in length. Also a similar yield of the Red Mercer and Buckeye—the two last named varieties I obtained from the balls, this being the 4th year from the seed or ball. A. Lawrence. *Mexico, N. Y.*

Descriptive Catalogue of Nourse, Mason & Co.—A large pamphlet of over 150 pages, profusely illustrated with several hundred cuts, representing nearly every imaginable agricultural implement and machine, sold at the celebrated and mammoth establishment of the proprietors at Quincy Hall, Boston. No farmer can examine this Catalogue without receiving valuable suggestions in relation to implements and their use.

C. M. Saxton, Barker & Co.—Our readers will remember that Mr. C. M Saxton, who was so long exclusively engaged in the publication of Agricultural Books, a year or two since disposed of that establishment to Messrs. A O. Moore & Co.—shortly afterwards himself entering into business as a general publisher, and subsequently becoming the proprietor of *The Horticulturist*. New arrangements are now completed in the re-purchase by him of the old business; and the firm named at the head of this note are therefore the proprietors of the stock, copy-rights, good-will, &c., of the book list and establishment of A. O. Moore & Co, as well as of *The Horticulturist*, and numerous miscellaneous works issued by Mr. Saxton. In taking leave of Messrs Moore & Co. as Agricultural publishers and the agents of our journals, we owe them the expression of our esteem and thanks, while we may also commend the new concern with confidence and pleasure, to the patronage of the public. [Address—25 Park Row, New-York]

The Croton Point Vineyards have not been unfruitful this year—a fact for the evidence of which, in the shape of a box containing Isabellas and Catawbas of the usual excellent quality, we are indebted to the proprietor, Dr. R. T. Underhill.

Oxford Down Sheep.—At the late Cattle Show of the Franklin Co. (Mass.) Ag. Society at Greenfield, the excellent and energetic Secretary of the Society, Jas. S. Grennell, Esq., exhibited a couple of Oxford Down bucks, a pair of Chester County pigs, and some turkeys of large size, adding materially to the interest of the exhibition, as none of these animals have before been seen at their shows.

Potato Rot.—I am sorry to say our potatoes are all going with rot, and a better crop and better quality we have not had in many years. When in Canada lately, I found they were also commencing to rot. J. Johnston *Near Geneva, Oct.* 17.

The Largest Apple.—A few days ago Mr Horace Greely of the "N. Y. Tribune," had sent him a "big apple," measuring 12½ inches in circumference, which he considered unequalled. You will now see it is beaten by your humble servant. The one I send you, weighed 21 ounces when it was pulled, some ten days ago, and measured 14¾ inches. It has been on exhibition here for some days, but has not yet been beaten, though many have compared with it. I raised it and wish to present it to you, and hope you will accept it. George F. Concklin. *Amenia, Dutchess Co , N Y.*

Cleaning Seed Wheat.—I met with several farmers during my late trip to Canada, who thanked me for publishing the way to clean chess out of wheat. One old man said, "Ah mon, you did us a good turn by learning us to clean chess out of wheat. I had been sowing and raising chess for 40 years, but I read your plan in the Montreal Witness, ten years ago, and now neither I nor my neighbors raise any more chess." John Johnston.

St. Lawrence Co. Fair.—We are indebted to L. E. B. Winslow, Esq , Sec'y of the Society, for a paper containing a full account of the Fair, which was held at Canton on the 28th, 29th and 30th of Sept., and appears to have passed off with unusual eclat, tho show having been good in every respect, but excelling in the Dairy department, there having been about 160 competitors for the premiums on butter and cheese.

Seeding with Timothy.—Mr. W. D. Kelly of Lawrence Co., O., gives in the Prairie Farmer, an interesting account of his practice in seeding land, from which we condense tho items following: He sows timothy seed on all his land, whether for meadow or pasture, finding the hay best for market; and as pasture, fattening cattle faster than other grasses, and without danger of hurting them,—they also require no water when feeding on timothy pasture. He prefers to sow the clean seed on ground plowed, rolled, and harrowed for it, about the first of September. If any part fails, he sows again in March, or as early as the ground can be worked, harrowing or brushing in. He sows clover occasionally to plow in, to keep his land in good order, and sometimes in mixture with timothy for pasture. His best crops of corn are grown on timothy sod.

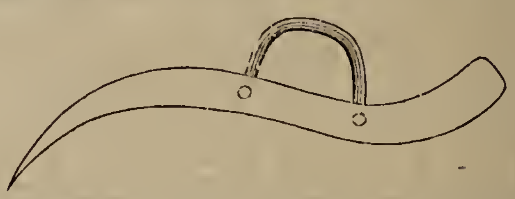
Improvement in Hop Planting.—We are indebted to some attentive friend in England, for a copy of the London *Star* of the 24th ult , containing the following interesting passage marked in its Paris correspondence :

> A valuable discovery in the cultivation of hops has just been communicated to the Academie. Like most agricultural improvements, it has been the result of observations made by a laboring peasant. It consists in making the plant run in a horizontal direction instead of climbing up the pole. This is managed by means of a low trellis work of the simplest construction. The advantages of this mode of culture are numerous. In the first place, it enables the grower to investigate the plant while growing, and cleanse it from the numerous insects which injure it to so vast an extent ; then it is protected from the sun, which always destroys the upper shoots ; it obviates the great destruction of hops in stormy weather, when the wind lays low whole hop grounds from the height of the poles ; and, most of all, it enables the gathering of the cones to take place without uprooting the plant, besides permitting the selection of the ripest ones at first, and preventing the great loss which arises from the necessity of tearing down the whole plant to get at the ripest blossoms.

Time of Picking Apples.—A writer in the *N. Y. Tribune* tells us that G. W. Browning of Luzerne Co., Pa , some years since accidentally discovered that winter apples picked some five or six weeks before the usual time of gathering, would keep sound some months longer than those allowed to ripen on the trees. Since that time he has picked his apples early, and reserved them for the spring and summer market, thus obtaining much higher prices than if sold in the fall or winter. Whether any effect upon the flavor and quality of the fruit was observable, is not stated.

Corn Huskers.

Messrs Editors—On page 32, vol 13, Co. Gentleman, you say "a truly valuable corn-husker is yet to be invented," and I think we might add there never will be any invented superior to the old fashioned one made thus:



It is generally of iron or bone, about half an inch wide, with two holes made in it and a leather strap put in, forming a loop; slip this over a finger of the right hand, and you are equipped. An active hand with this, can out husk any machine than can be made to do it with neatness. J. W. Lequear.

Lemon Pie—No. 5.

Two lemons—4 eggs—2 spoonfuls melted butter—8 spoonfuls white sugar. Squeeze the juice, and grate the rind of the lemon. Stir together the yolks, sugar, butter, juice and rind. Cover a plate with pastry, pour the mixture in, and bake till the pastry is done. Then beat the whites of the eggs to a stiff froth, stir into it four spoonfuls of sugar, put it on the pie, and place it into the oven till a delicate brown. This quantity makes two common sized pies. Nancy. *Keokuk, Iowa.*

Delicious Corn Bread.

Boil a teacup of rice. While scalding hot pour it on to little less than a quart of corn meal—4 eggs well beaten—a tablespoonful of lard—a teaspoonful of soda—a little salt—and enough sour milk to make a thin batter. Nancy. *Keokuk, Iowa.*

Kirby's Improved Mower & Reaper.

Eds. Country Gentleman—In your report of the awards at the late State Fair, you omit those made by Committee No. 54, *A.*, class 4. The following is an extract from their report:—"For the most valuable machine or implement for the farmer, either newly invented or an improvement on any one in use, we award the Silver Medal and Diploma to D. M. Osborne & Co., Auburn, N. Y., for Kirby's Combined Mower and Reaper. We find the improvements put upon this machine since the last State Fair, are of such a character as to justly entitle them to this award, and the exceeding simplicity and great strength of the machine must commend it to the farming community." This being considered one of the highest honors conferred by the Society, we think it deserves a notice with the rest. D. M. Osborne & Co., *Auburn. Oct.* 14.

Ag. Book Publishers—New Arrangement.

AGRICULTURAL PUBLISHING HOUSE.—Having purchased the entire stock and business of A. O. MOORE & CO., Agricultural Publishers and Booksellers, (formerly C. M. Saxton & Co.,) and united the same to our business as heretofore conducted, we now offer to the public the most extensive assortment of works on Agriculture, Horticulture, Rural Art, and Domestic Economy, that can be found in the world.

It will be our purpose to keep constantly on hand a full supply of everything in our line, and all orders and inquiries addressed to us will receive prompt attention,

Complete Catalogues of our publications, which embrace the Biographical Series and Miscellaneous Works, formerly published by *Miller*, *Orton & Co.*, will be forwarded to any address upon application.

C. M SAXTON, BARKER & CO.,
Agricultural Publishers and Booksellers, and Publishers of "The Horticulturist," 25 Park Row, New-York.

Having disposed of my interest in the Agricultural Book business to Messrs. C. M. Saxton, Barker & Co., (my friend, Mr. C. M. Saxton, having been formerly my partner,) I can cordially commend my successors to the Agricultural public, with the assurance that the cause for which Mr. Saxton and myself have for years conjointly and separately labored, will not suffer by this transfer.

New-York, Oct. 20, 1859. A. O. MOORE.
Oct. 27—w&m1t

FOR SALE—The Two-year-old SHORT-HORN BULL "ORION," got by "Squire Gwynne 2d," 1101, out of "Fillpail IV," &c., &c. See American Herd Book.

The subscriber offers him for sale upon reasonable terms, having another young bull not so nearly connected to his stock.

He took the second prize in his class at the State Fair at Albany. Any one wishing to purchase, or desiring pedigree or further particulars, may address

A. M. UNDERHILL,
Nov. 1—w2tm2t Clinton Corners, Dutchess Co., N. Y.

ILLINOIS FARMS! Three thousand acres of superior prairie lands, seven hundred under cultivation, and so located as to make fifteen or twenty small farms. Two railroads are within 5 miles of the tract, and the distance from Chicago is eighty-five miles. Bargains are offered to parties wanting farms in the west for their own occupancy. For particulars address JOHN W. HEDENBERG, P. O. Box 1462,
Nov. 1—m1t* St. Louis, Mo.

NEW AND VALUABLE BOOKS—
FOR SALE AT THIS OFFICE.

Farm Drainage. The Principles, Processes and Effects of Draining Land, with stones, wood, plows, and open ditches, and especially with tiles; including tables of rain-fall, evaporation, filtration, excavation, capacity of pipes; cost and number to the acre of tiles, &c., &c. By Henry F. French. Price $1.00.

Hints to Horse Keepers: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forester.) Beautifully illustrated. Price $1.25.

A Practical Treatise on the Hive and the Honey-Bee. By L. L. Langstroth, with an introduction by Rev. Robert Baird, D. D. Third edition, revised and illustrated with seventy-seven engravings. Price $1.25.

☞ Read the Proposal at the foot of this. ☜

THE NEW-YORK OBSERVER,
The Largest Newspaper in the World.
National, Conservative, Religious,

Belonging to no Party in Politics and to no Sect in Religion.

Edited by a corps of Clergymen and Laymen of large experience, having the most eminent Writers of the day among its regular contributors, and a Foreign Correspondence unrivalled.

It is the most complete
FAMILY NEWSPAPER
That can be made; published weekly on a large double sheet, so that it may be separated, making
TWO DISTINCT PAPERS,
Each perfect in itself. No other newspaper is made upon this plan.

The Secular sheet contains a full report of all the News of the Day; a vast amount of miscellaneous reading; poetry and prose; an Agricultural page, conducted by a practical and educated agriculturist; a Commercial page, edited by a gentleman distinguished for his acquaintance with the financial world—giving the latest reports of the Money, Produce, and Cattle Markets, Bank Stocks, &c.; a Miscellaneous department, embracing scientific, literary, and artistic matter, with tales, anecdotes, biography, travels, questions and answers, for the instruction and amusement of the family and social circle.

The Religious paper is filled with the choicest original and selected matter in every department of Christian Literature; making a delightful Sabbath companion, and furnishing a volume of interesting and instructive reading every week. The best and most accomplished Clergymen, Presidents and Professors in our Colleges and Seminaries, constantly contribute to its pages. One of its chief features of attraction is a Summary of intelligence from

ALL RELIGIOUS DENOMINATIONS;

A feature peculiar to the Observer, and highly valued by Christians who wish to know what is doing in other communions than their own.

The grand object of the NEW-YORK OBSERVER is to promote "peace on earth and good will among men." For this end it seeks to advance all those principles which make the Union of the States more firm and permanent; it cultivates harmony and good feeling among all denominations of Christians; and is a fearless defender of the rights of all men, under the Constitution of the United States and the Word of God.

In its Editorial discussion, its foreign and domestic correspondence, the vigor and beauty of its original contributions, and the attractions of its several departments in science, literature, art, agriculture and commerce, the NEW-YORK OBSERVER is determined not to be surpassed by any newspaper in any country.

Resisting radicalism in Church and State, promoting revivals of pure religion and every wholesome moral reform on Scriptural and rational principles, discarding and opposing all schisms, humbugs, fanaticism, and every scheme of infidelity, socialism, and vice, the NEW-YORK OBSERVER designs to be a safeguard of virtue, law and order, a champion of truth and righteousness in the earth.

It is the cheapest newspaper of its class that is published. Both the secular and religious papers are sent for *two dollars and fifty cents*, in advance. Two families uniting in taking it, as many do, will each get a complete newspaper for $1.25 ! ! !

PROPOSALS FOR SOLICITING SUBSCRIBERS.

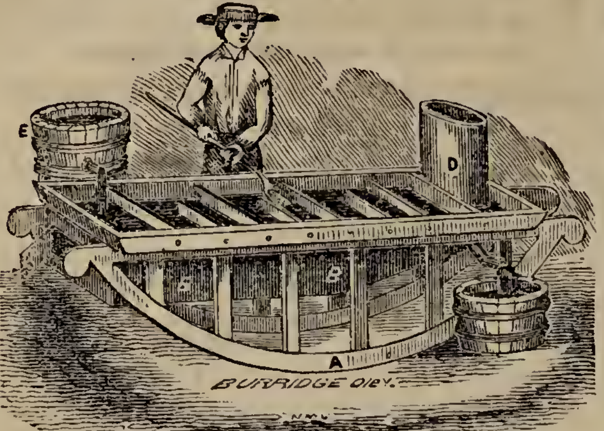
To any one who will obtain new subscribers for us, we will pay the following liberal commissions:—For five new subscribers *paying in advance*, fifty cents each; for more than five and less than ten, seventy-five cents each; for ten or more, one dollar each. We will send a copy of our Bible Atlas, with colored maps, on paper of large size and best quality, to each new subscriber, on the receipt of his name and payment for one year.

If you cannot give personal attention to this work, will you place this advertisement in the hands of some clergyman or layman who will take an interest in it, to whom we will give the commissions mentioned above.

We will send specimen numbers without charge.

Your early attention is solicited to this subject, and we shall be happy to hear from you immediately, as we desire to offer the paper at once to every family in the United States. SIDNEY E. MORSE, Jr., & Co.,
Editors and Proprietors.
Oct. 27—w2tm1t 37 Park Row, New-York.

THE PROBLEM SOLVED!



COOK'S
Portable Sugar Evaporator,

FOR making Maple Sugar, or Sugar from the Chinese Sugar Cane,

Patented June 22d, 1858,

Awarded the FIRST PREMIUM at the Illinois State Fair, September. 1859.

Also the FIRST PREMIUM at the United States Fair at Chicago, September, 1859.

Also the FIRST PREMIUM at the Ohio State Fair at Zanesville, September, 1859.

Also the FIRST PREMIUM at the Wisconsin State Fair at Milwaukie, September, 1859.

Also the FIRST PREMIUM at the New-York State Fair at Albany, October, 1859.

And the First Premium over every Machine ever Competed with.

The failure of a multitude of experiments by our most scientific men in crystalizing the syrup made from the Chinese Cane, has forced the public mind into the belief that it was an impossibility. The cause of the failure was the existence of a waxy substance in the cane juice, which could not be removed by any known process. But

THIS DIFFICULTY IS NOW OVERCOME.

Mr. Cook, about eighteen months ago, made the discovery that a *very rapid* evaporation of the cane juice, combined with an immediate removal of the syrup from the action of heat, not only extracted this waxy substance, but secured a perfect crystalization of the saccharine matter in the cane. The result of this discovery is the invention of his Evaporator illustrated by the cut above; and this is

The only Evaporator upon which Sorghum Sugar has yet been made!

It consists of a pan of protected copper or galvanized iron, crimped into folds with the alternate ends turned down, forming a transverse channel about five inches wide, and one and a half inches deep This is placed over a sheet iron fire box lined with brick, and suspended upon rockers.

From a tub at one end the juice flows in a continuous stream through the channel, and runs off at the other end of the Evaporator in a clear, honey like syrup, occupying in its passage

ONLY 20 TO 30 MINUTES!

The object of the rockers is to accelerate or retard the flow of the juice as occasion demands. For making sugar, reduce the syrup to a waxy consistence, and set it aside in a warm room from 2 to 6 days to granulate; then put it into barrels with holes in the bottom, and set in a warm place to drain from 6 to 10 days.

The Evaporator is a

SELF CLEANSER,

requiring NO CHEMICALS to clarify the syrup, a desideratum never before attained in the manufacture of sugar.

FOR MAKING MAPLE SUGAR

the Evaporator has no equal. It makes a remarkably white sugar, with more perfect crystals than can be made in the old way, and entirely dispenses with the "*stirring off*" operation, the process of manufacture being the same with that of the cane.

Directions for Cultivating and Working Chinese Sugar Cane.

1. Secure good seed.
2. Drill in rows 3 or 4 feet apart, putting in three or four times as many seeds as would be required in corn planting. This secures an earlier maturity and a better percentage of sugar than if planted thin and allowed to grow large.
3. If the cane does not ripen before the frost, cut it up and allow it to lay upon the ground a day or two to dry the blades and husks. Then haul, strip and top it, laying it in piles covered sufficiently to prevent freezing and thawing. In this situation it may be kept a long time. Sugar is readily made from *green cane* thus secured.
4. Frozen cane yields from 10 to 20 per cent. more sugar than if worked before freezing; but frozen cane must not be allowed to thaw again.

Cook's Evaporators evaporate from 2 to 6 barrels of juice per hour, according to size. Prices $35 to $52.

Address BLYMYER, DAY & CO.,
Oct. 13—w&m1t Mansfield, Ohio.
☞ EMERY BROTHERS, 62 & 64 State-st., Albany, Agents.

CHOICE FOWLS.—A limited number of each of the following varieties to spare, at low prices: Grey Dorking, White-faced Black Spanish, Earl Derby and other Games, and Aylesbury and Rouen Ducks. All warranted to be well bred. Also a few Improved Domestic Turkeys.

Send for Priced Circular. D. S. HEFFRON,
Oct. 6—wtfm3t Utica, N. Y.

BERKSHIRE PIGS of pure breed, and at a low price, for sale by WM. J PETTEE,
Oct. 6—w&mtf. Lakeville, Conn.

IMPROVED SHORT HORNS.—The subscriber, wishing to reduce his herd in numbers, offers for sale at moderate prices several excellent COWS with good pedigrees.

Apply at Ellerslie Farm, one mile south of Rhinebeck Station, Hudson River Railroad.

Sept. 22—w&mtf. WILLIAM KELLY.

GRAPEVINES.—All the best Native Vines at low prices. One good Plant each of the Anna, Delaware, Diana, Concord, Hartford Prolific, Louisa, and Rebecca, carefully packed for $5.

A large lot of Childs' Superb, two years old, to spare.

Send for Circular. D. S. HEFFRON,
Oct. 6—w6tm2t Utica, N. Y.

THOROUGH BRED AYRSHIRES. "Rosa Lee," 3 years old, color Red and few white spots, bred from stock Imported by Capt. Nye. Price $100.

"Lucy Neal," 4 years old, color White with small red spots, bred from same stock. Price $150.

"Effie," 4 years old, color dark red and white, bred by stock Imported by Wm. Watson, Esq. Price $175.

Rosa Lee is in calf by Young "Malcolm"—the others by Young Kelburn. These animals combine the blood of several different importations of distinct strains of blood, and are desirable animals. For sale by

ALFRED M. TREDWELL,
Sept. 29—w2tm2t. Madison, Morris Co., N. J.

BYRAM'S POTATO DIGGER. We have improved this implement so that it is easily converted into a

Double Mold Board Plow,

which makes it the most useful implement in use. As a Potato Digger it has no equal. Price of combined machine $8. Manufactured and sold by

GRIFFING BROTHER & CO.,
Aug. 4—w8tm3t. 60 Cortland St., New-York.

OPPOSITION FARE REDUCED

MERCHANTS' LINE OF STEAMBOATS,

BETWEEN NEW-YORK AND ALBANY

The Steamer KNICKERBOCKER, Capt. W. B. Nelson, leaves the foot of Robinson-st., New-York, every Monday, Wednesday, and Friday, at 6 o'clock, P. M.; the Steamer HERO, Capt. J. W. Hancox, every Tuesday, Thursday, and Sunday. Returning, will leave the Steamboat Landing, Albany, daily, Saturdays excepted, at 7 o'clock P. M.

Travelers will find it to their interest in calling at the Office of the Agents of this company, before engaging passage elsewhere.

Freight carried at reduced rates and forwarded promptly. ELI HUNT, Agent—Office on the Wharf, New-York.
G. W. STEVENS, 282 Broadway, Albany
March 10, 1859—w&m9ms

ANDRE LEROY'S NURSERIES, AT ANGERS, FRANCE.

The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends and the public, that his Catalogue of *Fruit and Ornamental Trees, Shrubs, Roses, Seedlings, Fruit Stocks, &c.*, for the present season, is now ready and at their disposal. Apply as heretofore, to

F. A. BRUGUIERE, 51 Cedar-Street,
Oct. 6—woam3m—m3t. New-York.

FARMERS AND GARDENERS sending their P. O. Address to us will receive by mail, gratis, our Illustrated Almanac for 1860, and information concerning Agricultural Implements and Fertilizers. Send us the name and P. O. address of good farmers in your town. GRIFFING, BROS. & CO.,
Oct. 13—w8tm2t 60 Cortlandt-st., New-York.

HUDSON RIVER ANTWERP RASPBERRY PLANTS, $2 50 per 100 ; $20 per 1000.

Lawton & Newman's Thornless Blackberry Plants $6 per 100. DAVID KETCHAM,
Oct. 1—mtf. Milton, Ulster Co., N. Y.

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address WM. LAWTON, New Rochelle, N. Y.

☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

HAY PRESSES of all kinds and sizes, both for Hand and Power, at

A. F. MAYHER & CO.'S
Agricultural and Seed Store, No. 54 Vesey Street, N. Y.

N. B.—Remember 54 Vesey Street.

Aug 11—w16tm3t.

A NEW PENNSYLVANIA AGRICULTURAL AND HORTICULTURAL MONTHLY PERIODICAL,

"THE FARMER AND GARDENER."

One of the cheapest and best Rural papers ever published in this State. A large and profusely illustrated Royal Octavo, with Agricultural, Horticultural, Botanical, Veterinary, Apiarian and Domestic Departments, ably sustained.

Send for a Specimen Copy. One dollar per year (*in advance.*) A. M. SPANGLER. Ed.,
633 Market Street, Philadelphia.

☞ $700, in premiums for Subscriptions and Essays.
Sept. 29—w2tm2t.

PORTABLE CIDER MILLS AND PRESSES. We have all the best and latest improved Cider Mills and Presses—also Wine Presses, Cheese Presses, Hay Presses, &c., &c.

A. F. MAYHER & CO.,
No. 54 Vesey Street, New-York.

New Stand, 54 Vesey Street.

Aug 11—w16tm3t.

GUANO!—The superiority of Phosphatic over Ammoniacal Fertilizers in restoring fertility to worn out lands, is now well understood. The subscribers call the attention of Farmers to the *Swan Island Guano*, which, for richness in *phosphates* and *organic* matter, and its *solubility*, is unsurpassed.

For sale at $30 per ton of 2000 lbs. A liberal discount will be made by the cargo.

Circulars, with directions for use, may be had on application at our office. FOSTER & STEPHENSON,
65 Beaver-st., New-York,
Agents for the "Atlantic and Pacific Guano Co.'
June 26—w26tm6t

HORSE POWERS AND THRESHERS, AND COMBINED THRESHERS AND WINNOWERS, Saw Mills, Fan Mills, Corn Mills, Corn Shellers, &c &c., of the best and latest improved kinds. We have all patents of both Tread and Lever Horse Powers and Threshers in store. Farmers in want of any thing in the Agricultural line, are requested to give us a call before purchasing elsewhere. Send for a circular.

A. F. MAYHER & CO.,
Agricultural Warehouse, Machinery Depot and
Seed Store, No. 54 Vesey Street, New-York.
Between Broadway and Greenwich St., north river side of city. **Remember No. 54 Vesey Street.**
Aug 11—w16tm3t.

THOROUGH BRED DEVONS. Annette (1151, 3d vol. Devon Herd Book) 3 years old, with heifer calf sired by Imported Duke of Devonshire.

Imported Heifer "Aurora," with Bull calf sired by Imported Duke of Devonshire.

Venus (1104) with Bull calf by Imported Duke of Devonshire.

Yearling and two year old Heifers. For sale by

ALFRED M. TREDWELL,
Sept. 29—w2tm2t. 45 Fulton street, New-York.

HORSE POWERS AND THRASHERS, Saw Machines with Saw. "Hickok's" Cider Mill and Press. Dog Powers, &c. Sold by

GRIFFING BROTHER & CO.,
Aug. 4—w8tm3t. 60 Cortland St., New-York.

EXCELSIOR FAN MILLS will clean Seventy-five Bushels of wheat per hour ; also Grant's, Clinton's, Mayher's, and all the best and latest improved Mills of the age.

A. F. MAYHER & CO.,
Agricultural and Seed Store, No. 54 Vesey St., New-York.

New Stand, No. 54 Vesey Street.

Aug 11—w16tm3t.

GRIFFING'S EXCELSIOR FAN MILL will clean 60 bushels per hour. All who use it acknowledge it to be the best Fanning Mill in use. Price $25. Manufactured for and sold by

GRIFFING BROTHER & CO.,
Aug. 4—w8tm3t. 60 Cortlandt St, New-York.

FARMERS & MILLERS TAKE NOTICE.—We have just introduced a new mill,

Which is the "Neplus Ultra" of Mills,

For grinding feed of all kinds, also for flouring. It is portable, and will grind with an ordinary Two Horse Power, from *five to seven bushels of feed per hour perfectly.*

It is called "Lyon's & Phillips' Patent," and is warranted to work satisfactorily, or it can be returned at our expense. It is no humbug, but a "Simon pure article ;" and every Farmer and Miller that uses it will certify that it is just the article represented.

Price for Feed and Corn Cob Mill,..................	$100 00
" Feed and Corn and Flour Mill,.........	115 00

Weight 450 pounds, and requires a space of four square feet. For further particulars address,

PEASE & EGGLESTON,
Aug. 4—w10m4t. Albany, N. Y.

Just Published, one vol. 12 mo.—$1.25.

MILCH COWS AND DAIRY FARMING; Comprising the Breeds Breeding, and Management, in Health and Disease, of Dairy and other Stock ; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese : embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland ; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture ; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying, yet issued upon the subject—is for sale at the office of this paper.

L. TUCKER & SON.
Albany, Dec 2—w&mtf.

Downing's Fruit and Fruit Trees,

JUST PUBLISHED, and for sale at this office—sent by mail postpaid, at $1.75.

Farmers should keep their accounts carefully, and know whether each year's operations will make them richer or poorer !

FARM BOOK-KEEPING.—By W. D, Cochran of Detroit. Sets—comprising *Full Instruction* in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully.—also *Day Book* and *Ledger*—for sale at this office—price by mail, post-paid, $2.30. L. TUCKER & SON

Agricultural Books,

Of all kinds, for sale at the Office of the Co. Gentleman

Now Ready—Single Copies sent by mail, post-paid, for Twenty-five cents—One Dozen Copies, post-paid, for Two Dollars. Agents Wanted.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, For 1860.

THE SIXTH NUMBER of this work is now ready, and presents features of no less attractiveness and value than its predecessors. The following abstract of its contents, together with the fact that they are Illustrated by no less than One Hundred and Seventy-eight Engravings, will afford better evidence of this than anything the Publishers can say.

I. ORNAMENTAL PLANTING—Thirty-Six Engravings.
  1. Requisites for a Home.
  2. Various Modes of Grouping.
  3. Plans of Garden and Ornamental Grounds.
  4. Various Details—Lawns—Walks—Rustic Objects.
  5. Trees—Hints in Saving Expense.

II. COUNTRY DWELLINGS—Twenty-five Engravings.
  1. General Considerations.
  2. Working-Men's Cottages—Three Original Designs by Geo. D. Rand.
  3. Farm Houses—Five Original Designs with Ground Plans, &c., by the same Author.

⁂ This is a Chapter which will prove serviceable especially to those who wish suggestions as to neat and inexpensive structures for practical purposes, which with some taste and considerable extent of accommodations, combine great convenience of interior arrangement.

III. HEDGES—Thirteen Engravings.
  1. Different Plants for Fencing Purposes.
  2. Training and Pruning for first Four Years.

IV. FENCES AND FENCE MAKING—Fifteen Engravings.
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XII. ADVERTISEMENTS.

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Address all orders or inquiries to the publishers,
LUTHER TUCKER & SON,
Oct. 1, 1859. Albany, N. Y.

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FORBES.
VAN VRANKEN. N.Y.

THE CULTIVATOR.

THIRD To Improve the Soil and the Mind. SERIES

Vol. VII. ALBANY, DECEMBER, 1859. No. XII.

Close of Another Volume.

Acknowledgments.—In laying before our readers the last number of the Twenty-sixth Volume of The Cultivator, we should renew our thanks, both to those who have during the past year—and some of them for many previous years—assisted in sustaining and enlarging its circulation, and to those, also, who have favored us with the results of their experience for publication. The encouragement extended to our efforts in both these respects has been most gratifying, and, in entering upon the New Year, we cannot do better than refer to the past as evidence both of the aims we shall pursue, and of the readiness of the Agricultural public to co-operate with us in their accomplishment.

The Volume for 1860.—In order to gather the most facts that will be of service to our readers, and to ensure as large a circle as possible in which to discuss them, we last month mentioned the contemplated *enlargement of this paper*, and at the same time the *increased inducements offered to subscribers*. The responses elicited have been numerous and hearty, and the promises of larger club-lists for 1860, are such as to show that the outlay now determined upon meets with general appreciation and approval.

To the Reader.—In The Cultivator we invite you to a monthly interview with the best farmers of all parts of our country; in the resulting interchange of facts and opinions, there will probably be no single number which is not laden with some suggestion of greater value to you than your whole subscription for the year. Will you then introduce to your friends the same means of advancement? Are there not ten, twenty or fifty, the names of whom at once occur to you, who might be greatly benefitted by reading these pages, and who would gladly avail themselves of the opportunity if it were put fairly within their reach?

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Sheep in Fall and Early Winter.

Though late in the season, the freshness of the grass in our pastures encourages us in the belief that it is not "too late" to render some hints on the fall and early winter management of sheep and lambs of use to our readers. It is an established axiom in sheep husbandry, that "the flock should never be allowed to get poor in the fall, because it will cost much more to winter them than when they come into the yards in good order." So that a little *present* attention will pay, as well as any that can be given in future.

Ewes with lambs are apt to get low in flesh in summer and autumn from the demands of their young for nutriment, and it is well to give them especial good feed while the supply of milk is required. If this has been done, and if the lambs were separated from the sheep the last of September, and both allowed good pasture, probably they are in fair condition for the winter. To show the effect which suckling a lamb produces upon the ewe, we may state a fact recently coming under our observation. A dry ewe was slaughtered from the flock, and gave 12 lbs. of tried tallow. Another, having a lamb, was afterward killed, about equal in size and having the same pasture, but giving less than one-third the amount of tallow. Nursing ewes, it will be seen, must have *good* feed, or both themselves and their lambs must suffer.

To keep any large number of sheep in good order, they must be divided into separate flocks, according to age and condition, both summer and winter. The lambs should have good pasture, that they may not lose flesh from weaning. The ewes, also, as mentioned above, and the whole flock, should be well fed, that they may come in good heart to their winter quarters. If any of the flock, from age, disease, or any other cause, have become poor, they should be given a separate place and particular attention; and we should take into consideration the policy of disposing of them at some rate, rather than keeping them another season. It is necessary, we repeat, that sheep be in fair order when brought to the yard, because it is very difficult to raise them in flesh in the winter. It is very generally the case, however, that poor fall sheep are drafted for crow-bait before spring—their owners following up the neglect of summer through the year, and reaching the culminating point just in time to lose nine months growth, a lamb and a good fleece of wool, always secured under the opposite system of management.

As the grass becomes frosted and poor, it is well to be on the watch to see that our flocks have all the food necessary, and that it is good enough to keep them growing. We are not in favor of the close confinement of sheep in pleasant weather, but would allow them the run of the pastures for some time after we began to feed them occasionally. In stormy weather, however, they should be under shelter, for the long, cold rains of this season, are very injurious, and if exposed to them, sheep often get disease of the lungs, from which they suffer much and perhaps never recover.

For fall and winter feeding, racks are indispensable to proper economy. These can be wholly or partially filled, and what is not eaten will not be run over and wasted. We would no more attempt to winter sheep without them, than to winter working-horses without a stable to shelter them. Shelter is equally necessary for sheep, and can be very cheaply provided, though permanent structures for the purpose, are most convenient and answer the end most perfectly. Grain is not lost upon sheep at any time, and in addition to those commonly employed, we have found beans very valuable. Last spring, after turning our sheep to pasture, we fed them beans—scattering them upon a thick, close-fed turf, and none were lost. We shall resume the practice this fall, and continue it (in their sheds) through the winter. It is said that wool grows most in cold weather—if so, it is doubly important that sheep be well fed, that they may have the material wherewith to grow heavy fleeces, as well as to keep in full vigor through the winter.

Grape Culture in Central New-York.

Messrs. Editors—In reply to the inquiries of your correspondent of Nov. 3d, and in response to your own request, I will venture an opinion in reference to the best grapes for this part of our State.

If your correspondent desires to know what grapes are best for general market purposes, I should say, the Hartford Prolific, Concord, and Isabella. The Hartford Prolific bears abundantly, ripens earliest, and is quite palatable. The Concord follows the Prolific, only a few days behind; is large and showy, both in its berries and clusters, and when eaten at just the right time, is of quite good quality. The Isabella should be planted, of course; for though it seldom becomes fully ripe, it generally becomes blue, and quite pleasant to the taste. It is a great bearer, and prolongs the grape season after the sorts just named have passed away.

I will just add here, that the Logan *promises* now to be an earlier grape than either of the above, and it is thought will not be inferior to any of them in quality.

The three grapes first named should be the planter's main reliance. But as some people will want to buy finer sorts, he had better set out a few Dianas and Delawares. The Delawares will be ready for market along with the Concords, and the Dianas along with the Isabellas, or a week before.

If, however, your correspondent is an amateur, and wishes a good assortment for the supply of his table, I should say—leaving a place for the Logan, in case it fulfills its present promise—plant one vine each of Hartford Prolific and Concord, but devote your ground chiefly to the Delaware, Diana, Rebecca, and Isabella. An occasional taste of the Prolific and the Concord, will serve to show you the superiority of the others.

Several other grapes are now being tested in this region—such as the Anna, Clara, Child's Superb, Louisa, King, &c.,—but their character has not yet been sufficiently proven to warrant an opinion upon them at present. A. D. G.

P. S.—If a grape can be found, which neither boys nor birds will steal, I should advise putting that at the head of the list. G.

◆ ◆ ◆

Import of Foreign Bees.—The Agricultural Bureau of the United States Patent Office have received intelligence of the shipment from Havre, France, of a large swarm of Lombardy bees. They are of larger size than the ordinary bee, and, having a longer bill, are able to suck flowers inaccessible to the American bees. The product of an old hive of these bees is said to be sometimes 150 lbs. of honey in one season. These bees will not be distributed until 1861, by which time it is expected to rear from the swarm now *in transitu*, stock enough for six hundred hives.

"Unfavorable Seasons"—Summer Drouths.

Summer Drouths and their Effects—Soils which best withstand Dry Seasons—Deep Tillage, Frequent Culture, and a Mellow Soil our best Remedies—"Death to the Weeds"—Give the Crop a monopoly of the Soil—Best Condition of Soil to Retain Moisture—Proper Depth of Plowing on Different Soils.

We resume our consideration of "Unfavorable Seasons," with some considerations of another and more serious characteristic.

2. *Seasons of drouth*, of more or less severity and extent, are of frequent occurrence in our climate. Weeks, and even months, pass with little or no rain; the scorching glare of the sun drinks up our summer brooks and turns the fields to dust or brick-like clay beneath it. The growing crops are shriveled and dwarfed by the heat, and the pastures become as brown as in November from its influence. Let us look about us for a remedy, if any may be found. What character of soil best withstands the effects of long continued dry weather? It is invariably the porous, friable soil—that which has been deeply cultivated and highly manured, and if a hoed crop, that which has been most cleanly cultivated. It is well known that one of the most effectual preventives of the effects of drouth upon the crops, is a fresh and mellow state of the soil upon which they are growing. This can be attained perfectly but in one way—by frequent stirring and cultivation—though it can be greatly promoted by a proper preparation of the ground before the seed is sown or planted. If land is deeply plowed and thoroughly pulverized, and at the same time prepared, either by the nature of the subsoil or artificial drainage, for the ready passing off of all the surplus water, it will remain for a long time in a mellow state. But shallow tilled land, with a retentive subsoil, is always found to become comparatively sterile under the influence of excessive dry weather. A heavy rain falls, completely saturating the mellow portion of the soil, the surplus water cannot sink rapidly away into drains or a porous subsoil, but must pass away by evaporation, and the surface soil becomes baked and hard under this slow and peculiar process.

What, then, is the best method of guarding against the effects of drouth? This question was addressed some years since, by the Mass. Board of Agriculture, to prominent farmers throughout the State. The respondents, in nine cases out of ten, recommend deep culture and frequent stirring of the soil. "To keep the land free from weeds," is the panacea of the farmer, as it has long been of the gardener. It is true that the evaporation of moisture is the greatest from a light soil, but it is also true that it receives moisture more readily and largely from all the sources which supply it. We find little or no dew upon the beaten path, when the grass at its side sparkles with dew-drops in the morning sun. The fresh turned earth receives a much larger supply than that upon which a hard crust has formed—it penetrates much farther, and hence passes off with less rapidity. This is true also of light showers. All who have experimented upon the subject, are satisfied that all crops which will admit of summer cultivation are largely benefitted by the process. And the best products of corn and roots, of fruits and vines, are invariably those which receive frequent, clean and thorough hoeing and culture. We have observed this fact particularly in all reports of large corn crops, in every mention of thrifty and productive orchards, in accounts of the best and most profitable vegetable gardens—all were grown on a mellow, clean and frequently stirred soil. The want of rain seemed scarcely felt, while the products of shallow and weedy soils were much reduced in consequence.

It is a matter of much importance to a growing plant, whether it has its appropriate breadth of soil to itself, or whether weeds surround it, robbing it of the moisture and nourishment which should go to its support. Its roots and leaves should have room—should possess a monopoly of all the benignant influences of nature. A deep, clean and mellow soil, is the best remedy against drouth, as well as the best preparation for good crops, whatever the character of the weather granted to forward the hopes of the husbandman.

We said that a deeply plowed and thoroughly pulverized soil, would remain for a long time in a moist and mellow state. In the long drouth of 1854 in New-England, a pertinent case is mentioned, where two neighbors farmed adjoining fields precisely alike, with the exception of depth of plowing. One plowed four inches deep, and grew oats weighing but seventeen pounds per bushel; while the other, plowing nine inches deep, raised oats weighing thirty pounds per bushel. The proper depth of plowing depends, we think, considerably upon the character of the subsoil, and the condition of the land as to drainage. A porous subsoil would admit of the rising of moisture from below, while a hard-pan or clayey soil, would need to be plowed to a greater depth, so as to prepare it for taking all possible aid from slight rains, the dews, and the moisture of the air. A well drained soil would present the same general characteristics of one with a porous subsoil.

Autumn frosts, with some general considerations on the evils of unfavorable seasons, and their remedies, will be made the subject of a concluding paper.

◆

Pasturing Meadow Lands.

Pasturing meadows has been very generally condemned as injurious by American agriculturists; but under proper conditions it may be the most profitable course for the farmer. After the crop of hay is taken off, a fair growth of grass usually follows on all properly enriched meadows, usually of greater use for pasturage than for cutting as second-crop hay, or if not sufficiently large, to remain unfed with the idea of enriching the soil by its decay, or as a protection during the winter. The manure dropped by the animals pastured, furnishes a better means of increasing the product of the meadow, than can be obtained from the grass without feeding.

THAER, in his *Principles of Agriculture*, speaking of the English practice of pasturing meadow land, where sheep are suffered to graze upon them until late in spring, and, immediately after the hay is gathered in, cattle are turned on to eat off the after-grass, says "all the comparative experiments which have hitherto been made, tend to prove that under this system meadow land improves much more, and is rendered more fertile than it would be if mown twice in the year. The herbage is finer and thicker, and no coarse, hard stems or weeds are seen; the excrements voided by the animals manure the soil quite sufficiently, and this mode of proceeding is greatly to be recommended under certain circumstances."

We find in the State Ag. *Transactions* for 1858, some facts bearing on this question. The committee visiting the grazing farm of Mr. Clift of Putnam Co., state that Mr. C. pastures his meadow land "as late in the spring as May, and again in the summer and fall after the hay crop is secured. On one field this treatment has been continued for fifteen years with good success; its yield now being rated higher than ever before." He seeds with timothy and clover, but if allowed to remain without plowing for a few years, red-top, blue grass, and white clover come in spontaneously—and this natural growth he esteems very valuable, both for hay and pasturage. "The first year after seeding, it has been Mr. C.'s practice to pasture, a better set of the grass, he thinks, being thus attainable, than if the first season's crop is mowed." Mr. Clift's farming, it should be remembered, is very thorough—his soil is underdrained where too wet, and deeply tilled whenever it is plowed, and a system of irrigation is also in operation; all these enabling him to show the best grass and grazing farm in the State, and probably in the United States, to all who visit it. It received the first premium of $50, the year referred to.

On good grass lands—such as are in soil and condition appropriate to the production of hay and pasture—we have no doubt that an interchange of uses may be made profitable. In our own experience, we have found that thinly stock'ed grass lands, especially low-land meadows, could be thickened at the bottom by mowing early, and then, after a season of rest, feeding down in autumn—not too closely, however, nor would we feed any save an old and very thick-bottomed pasture, *closely* in autumn. Such meadows alone may be grazed in the spring, but it is better usually not to allow meadows to be fed off at all until after haying. If a timothy, blue grass or red-top meadow has been allowed to grow up in the fall without feeding, the growth may be worth something as feed in the spring, and some farmers place considerable dependance on such supplies for early spring or winter pasturage, especially in the blue-grass region of Southern and Western States.

The question of pasturing grass lands is not so important in our present state of agriculture as it is in that of a different climate, and under a different system of management, as in England. But were we to give, as we must, to make all branches of our farming more profitable, increased attention to the culture and management of such lands, we should find even in our climate, and under the circumstances which here surround us, such an increased product of grass that we might study its best disposal as carefully as they do in the old-world farming. It is the fertile, well-stocked meadow that yields the greatest burthen and best quality of hay; it is the rich and thick-turfed pasture that feeds and fattens the greatest amount of stock, and such lands when under cultivation, give large products of grain or roots, or anything to which the farmer may wish to devote them.

◆

Wheat Planted in Hills.—Mr. Yant, near Bolivar, O., writes to the Ohio Farmer, that he has planted an acre of wheat, about 20 by 15 inches apart, in hills, using a little over five and a half pounds of seed to the acre. He put five kernels to the hill, but thinks one-third failed from grubs, cut-worms, etc., and this he has replanted. A part has been hoed; the growth is splendid—as far as that is concerned he has no fears. As to the expense compared with the yield of grain, next harvest will show.

Intelligent Diligence.

It is especially true with the farmer that "the hand of the diligent maketh rich," for it is constant and earnest application to business by which he reaches prosperity. Speculation, turning its thousands in a day, finds raising grain or growing beeves for market, altogether too slow to suit its eagerness for wealth, (though it may have a great fancy for *selling* these products.) Both these enterprises are safe and profitable ones, but time is required, a season at least must pass; and above all, the mind that looks forward into the future must direct, and the hand of the diligent be active in the work. The farmer needs to give all his energies of thought and action to the calling he has chosen. He cannot devote all his attention to "saving the country" in every political "crisis" which arises, or enter largely into every new enterprise which seeks his influence and "investments," and at the same time raise crops, and breed stock which figure well on the profit account, as well as take first premiums and command highest prices. He must be intelligently dilligent in plowing and manuring, in planting and tilling, in sowing and reaping, in feeding and tending, and watch every opening for improving his farm and its products—all seasons having their appropriate demands upon his labor and attention.

The opposite course of negligence and inattention will bring the farmer to poverty. With a slack hand he will not succeed in the cultivation of the soil, or in any industrial management of the same. The implements of agriculture are sturdy implements—the axe, the plow, the scythe, the flail, need a firm hand and a steady purpose to make them tell in forest, field, and granary. Dallying with them, without energy and without persistence, will accomplish nothing. And such dallying will leave its mark upon all with which it has to do—effiacing slowly but surely every evidence of comfort and prosperity from the home and premises of those who practice it. It is so, not only in agriculture, but in every calling in life, and many and varied are the instances in which it may be seen exemplified, for the "slack hand" of the proverbialist tries all callings, and fails alike in all.

The results above depicted are so evident that they scarce deserve remark, and yet how many there are among us who need rousing up to greater diligence, that they may not lose any share of the advantages within their grasp. The hand of the diligent, directed by the active and intelligent mind, gathers wealth upon every side. This is the result not only of work, but of thought—not the thought of abstruse themes and impracticable theories—but the study of actual business and its every day requirements. He who is diligent to know and to carry out the true principles of productive labor, creates wealth by every blow he strikes, by every furrow he turns, by every crop he cultivates, by every animal he rears or employs—all these add to his means of wider usefulness. And to arrive at such an end as this—will it not stimulate the energies, and reward the ambition of every true working farmer in the country? Let us deal, then, no longer with a slack hand, but take hold of the work before us with the firm grasp of the diligent—the grasp directed by reason and nerved by a will and a power to succeed.

◆

The Yak, or Grunting Ox.—The French Society for the Acclimation of Animals have succeeded in breeding the Yak, there now being seventeen Yak oxen sprung from the three originally introduced.

How are Plants Fed?

Those who have read the leading article in the Co. Gent. of Sept. 8th with some care, will have been already made acquainted with a problem to which much thought has of late been devoted. In calling upon Baron Liebig at Munich, in June last, the eminent chemist particularly directed the attention of the writer to that portion of his "Letters on Modern Agriculture"—then just issued—which was reviewed in the article referred to above. The question there discussed is, how the plant obtains in the soil the materials, from which, day by day, it gathers strength and growth.

Of late years, the theory propounded by Jethro Tull, that "*fine particles of earth are the very pabulum* on which the plant subsists," (quoting his own expression,) has been utterly discarded. The teachings of the Science of our day have been that plants absorb their food in a state of *solution*. The rains from heaven come and the materials requisite in the vegetable structure are dissolved among the fibres of its roots; the air above breathes among its million-pored leaves, and evaporating their moisture, maintains a constant suction as it were, ever drawing up through root and stalk and leaf, the resources of moisture mingled with food that are in readiness below.

Inferring from this that the amount of soil-water taken up by the roots, must be precisely the same and no more than the amount of moisture evaporated by the leaves, a difficulty arises in the fact that this amount is too small to contain in solution the quantity of food which the appetite of the plant requires. The solution cannot be otherwise than extremely diluted; indeed, on experiment, it is stated that some of the materials of the plant won't dissolve at all. In effect, proceeding upon this line of reasoning, the plant is only to be compared to a pauper fed on soups so thin that he must starve, unless he can supply the cravings of his stomach in some other way. And the argument therefore ends by denying utterly that vegetable life receives its food in soup form, so to speak, and in the assertion (in Liebig's words,) that the "nourishment" of plants is received "*directly from those portions of soil* which are in immediate contact with their rootlets."

Robert Russell of Edinburgh, seems to have followed out the suggestions indicated in the last paragraph to their natural conclusion before Liebig, although published by the latter as original with himself. In conversation with Mr. R. he left no doubt in the mind of the writer that the credit of the new theory, or rather of attacking the soundness of the received theory, is justly his. Neither Mr. R. nor Liebig would probably take it as a compliment to be told that they are, however, reverting almost precisely to the theory of Tull. Between their present position and his, there seems to be only a difference of words, and indeed one not very important there.

We do not propose to enter upon any discussion of the subject, but it may interest our readers to hear from time to time the progress of the controversy and the different views it embraces. The opportunity of the present remarks is afforded by the reception last week of a paper from Mr. Russell—a contribution we presume to the last Edinburgh Quarterly *Journal of Agriculture*—in which he reviews a recent article by Prof. S. W. Johnson in the *Am. Journal of Science*, in connection with one by M. F. Brustlein in the *Annales de Chimie et de Physique*. And we embrace the opportunity not only in order to acknowledge the courtesy of Mr. R., but because the time and thought he has given to the question involved, as well as the fact that the doctrine he has put forth receives such earnest assent and support from a man like Liebig, appear to us eminently worthy the attention of other thinking and observing men. We need scarcely add, however, that Professor Johnson sees no occasion at present to abandon the theory of solution—on the other hand many, and, as he thinks, invincible arguments in its support, and a reasonable explanation of its difficulties.

* * *

"Unfavorable Seasons."—Early Autumn Frosts, Etc.

Early Autumn Frosts will come—"Good Farming," the Best Security against Injury—Seasonable Planting and Sowing, Selection of Early and Vigorous Varieties, a Fertile Soil, and Thorough Culture, give Early Maturing Crops—"Mixed Husbandry" advised.

The concluding topic of this series is one that comes feelingly home to many farmers at this time. Following a remarkably backward spring, we have an autumn frost unusually injurious in its effects—the means we would commend in precaution having been cut off to great extent by the great frost of June 4th of the present year.

3. The *Early Autumn Frosts* oftentimes fall most severely upon the prospective rewards of those farmers whose crops and whose prosperity are most seriously affected by the "Unfavorable Season." The "cold, wet spring" has delayed their seeding and early growth, "the drouth" of summer dwarfed the product in quantity and quality, and now, an "early frost" puts the finishing touch to the remaining crops. And how could it have been prevented? In no way save by the employment of the means indicated in our previous articles, for hastening and increasing the growth and maturity of our crops, that they may be out of the way of injury from this source. Good or "thorough farming" presents the best safeguard against loss from early frosts, within the reach of the husbandman. Seasonable attention to sowing and planting, the selection of the best seed and varieties, the thorough preparation and manuring of the soil, and clean culture—these hasten the maturity of our crops—these give the best returns in "unfavorable seasons," as well as proving the most profitable mode of farming, however genial the weather may prove.

But there are changes and contingencies of the climate against which no human skill or foresight can provide. The cold of winter may be so excessive as to destroy the fruit crop of the coming season, or even the fruit trees themselves, or a "great June frost" may cut off the winter grain, and wither the half-grown grass and fruit, and cut down our corn when ready for the hoe, destroying all the tender products of the garden, etc., by its unlooked for appearance. Long rains at the season of harvest, may injure to a large extent our ripened and waiting grain, and flood the farms along our streams with destructive freshets. Destructive hail-storms may fall on narrow sections of country with devastating power. Wide-spread blights and insect enemies may ruin particular crops, like the potato rot and wheat midge—in short, for we will not extend the catalogue, the farmer is never sure of a season of unmingled prosperity. His best resource, as we have advised before, is a system of *mixed husbandry*—to carry on more than one branch of agriculture—to combine grain and fruit raising, wool and stock growing, and the dairy, to a greater or less extent, as his soil, resources, and market facilities will admit, so as to have a resort for employment and support, should one or more prove unprofitable from an unfavorable season or any other cause. In conclusion, we would disclaim the idea that farming is a business incurring more, or as many risks, as many other branches of human employment, if carried on with any regard to the maxims of common sense.

Propagation of the Blackberry.

Messrs. Editors—As the cultivation of the blackberry is deservedly attracting a considerable share of public attention, the rapid multiplication of good varieties becomes important, to secure a supply at reasonable prices; and having had a little piece of experience in propagating the Lawton blackberry the past summer, which has been pleasing to me from its simplicity, ease, and rapidity, I wish to give it you for the benefit of such readers of the Co. Gent. as are as ignorant as I was on this subject, if there *are* any such.

Having occasion to take up a block of plants, I thoroughly worked the ground over and secured all the roots I could, which were cut into pieces of from 3 to 6 inches in length. These we bound in bundles of from 300 to 500, and buried in sand in the cellar, where they remained until quite late in the season, probably about the 20th May, when we took them out for planting, and were agreeably surprised to find shoots starting on nearly every root. We dropped these so as to lay horizontally in broad drills, opened with a hoe, the same as for apple or pear seed, in rich, mellow, well prepared soil, and covered about two inches deep.

In two or three weeks the plants began to make their appearance—feeble at first, but gathering strength with their growth by sending out numerous side branches, until now (Oct. 1st,) many of them are of good size for setting out, and still growing very fast.

This method of propagation is quite likely familiar to many, but not having noticed it in print, I have remained in ignorance on the subject, although I have suspected for some time that particular persons were increasing their stocks in some way, more rapidly than by suckers.

From what I have observed of the manner of growth of the blackberry plant, I conclude that good-sized roots, cut up and treated as above, are about as certain to grow, if used with care in regard to exposure to sun, wind and frost, as potatoes or quack grass even. E. D. Robinson. *Howlett Hill, N. Y.*

Shelter for Cattle in Autumn.

Messrs. Editors—Those chilling storms and frosty nights which have begun once more to visit us, have called my attention to an error practiced by many farmers in leaving a portion of their stock to lie upon the ground at night, yarded in the open air, and exposed to all the vicissitudes of the weather, at a time too when the heat of the preceding summer has induced such a habit of body as to render them highly sensitive to the first approach of cold. If we would reason from our own experience, we should see that it is the transition from one extreme of climate to another which affects them most seriously, and we ought, consequently, to pay a special attention to their comfort at such times.

Cows that have been allowed to remain in the pasture at night, or yarded away from the barn, should now be furnished at night, at least every cold and stormy one, with shelter and a *dry* place to lie.

Young stock should, when it is practicable, be similarly provided for, although many farmers think they may be allowed like sheep, to find their shelter where they find their food till they are finally brought into winter quarters.

These suggestions are not urged principally upon the score of humanity, although that is not to be overlooked, but it is to be borne in mind that as the thrift and value of animals are inseparably connected with their bodily comfort, the profits to be derived from them are increased or diminished in direct proportion as that is promoted or impaired. J. S. C. *Lee, Sept.* 24.

Teasel or Fuller's Thistle.

The Teasel is a large biennial plant, 4, 6 to 8 feet high, and the stem and ribs are covered with prickles; this stem and the secondary branches are terminated by flower heads, nearly the size and shape of an egg, covered thickly with strong, hooked, elastic spines; these heads are used for carding, raising or laying the nap so as to give to cloth a perfectly smooth finish, the elasticity of the spines giving way before the cloth can be injured. A variety of steel carding instruments have been invented to set aside the Teasel, but all of them have proved to be useless, as they damage the cloth more or less. It requires from 1500 to 2000 Teasels to dress a piece of cloth. A factory in Rhode Island uses 2,000,000 per year.

The most proper soil for Teasels is a deep, dry and strong loam. Plow deep in April, then harrow well. The seed, which should be new and plump, is sown in April or May, in rows 2, 3 to 3½ feet apart, and covered lightly. The first year the plants should be well cleaned, hoed and thinned to 6 or 8 inches in the row; after the second hoeing in July, another crop, such as turnips, carrots or beans, can be sown between, and thus yield a secondary crop without extra expense or detriment to the Teasel, cleaning those crops properly from grass and weeds; the second year stir the soil, weed and hoe well until the plant begins to shoot up, when it can be earthed up, which will strengthen it; when any suckers appear they should be pulled up. Teasels will sometimes flower the first year in very hot summers; harvest the heads as they ripen, and should most of the field be in that condition, harvest the whole. If the main head is suppressed, the other heads will enlarge and multiply.

In ordinary circumstances the gathering of the heads begins about the middle of July, when all the flowers have fallen off, and the heads assume a white color. They do not ripen altogether, and the harvesting is generally done at three different times, at intervals of a week or ten days. The ripe heads are cut off with one foot or six inches of the stem, which are tied up by fifty, when they are carried to a dry shed or garret, or dried in the sun. Great care must be taken not to leave them in the wet or rain, which would rot the head and weaken the prickles; the heads are sorted in two or three different sizes, the largest commonly called kings, then middles and scrubs; they are generally packed in bales containing about two hundred parcels of fifty, which is about 10,000 per bale. Those kept over one year are better than fresh ones, as the spines will be stronger. To obtain seed, a few of the finest stems are left for that purpose.

The produce of Teasels is very great, as each plant will produce 5 to 7 and 9 heads, which would be from 140,000 to 200,000 per acre I have been told that about thirty years ago, an Irish gardener near Little Falls, N. Y., raised about one-fourth of an acre to half an acre of Teasels, which he then sold for $800, but then they were very high in price. The price varies; they have ranged from 75 cents to $3 and $5 per thousand; the average price is about $3. As the Teasels improve by keeping, there is no hurry to dispose of them; they can be kept over a year with benefit. F. A. Nauts. *New-York.*

Packing Apples in Plaster.

Eds. Co. Gent.—I tried last fall, an experiment with great success—not new, but I think not commonly known—of putting down apples in plaster of Paris. Put an inch of plaster into the barrel—take the apples fresh from the tree—set them on the plaster so that they will not touch each other or the barrel, then sift on more plaster between and on them, deep enough to form a new layer, and so on till the barrel is full. I found them on opening the first of May, as fresh and sound and firm as when picked from the trees. J. S. Grennell.

German Agriculture.

Extract from a letter to the Editors of the Country Gentleman and the Cultivator, from the Author of "Peasant Life in Germany."

We have perhaps a hundred times alluded to the marvelous thought and care and labor bestowed upon these little patches of ground, where a few acres must be made to support a family, and we never cease to marvel at the amount they will exact from a little piece of earth, but at the closeness of their calculations, telling to a farthing's worth how many human beings and animals can be fed by the produce of a few square rods. What a waste of land there still is in what are called the over populated portions of America. What a capital would a few Flemish, or German, or Swiss peasants make out of the strips and corners all over the Eastern States which are entirely unappropriated.

On a farm of six or ten acres, there will be neither plow, horse, nor cart; the substitutes for these being spade, fork and wheelbarrow, and all the labor is performed by the family. They *reckon* that a family of five, a man, wife and three children, require thirty-nine bushels of grain, forty-nine bushels of potatoes, a fat hog, and the butter and milk of one cow. An acre and a half of land will produce the grain and potatoes, and allow some corn to finish the fattening of the hog, which has the extra buttermilk; another acre in clover, carrots and potatoes, together with the stubble turnips, will more than feed the cow. Consequently two acres and a half of land are sufficient to feed this family, and the produce of the other three and a half may be sold towards paying the purchase money, wear and tear of implements, extra manure, and cloths of the family. Upon three acres are grown hemp and flax, and considered the most profitable of all; and if they can have a seventh acre, they can keep a second cow, and sell what it produces. The daily food of such a family is buttermilk, potatoes, and brown or black bread. On Sundays alone, and in harvest time, do they indulge in meat. They can tell to a kreutzer how much they spend every day and on every meal, and are sure to do more than make the ends of the year meet. They are not so intelligent in other matters as American farmers, but in minute attention to the qualities of the soil, in the management and application of manures, in the judicious succession of crops, and especially in the economy of land, so that any part shall be in a constant state of production, they have been wiser for centuries, and wiser than those who live where land is cheap and abundant will ever become. When they have so multiplied that there is no other spot for them to till, I am sure they will convert the desert of Sahara into a fruitful field. It is not more truly a sandy plain than the wastes they till. Where there is nothing but deep dry sand, they first sow *broom*, which is the only thing that will grow without a particle of manure, on an utterly barren soil. The third year it is fit to cut, and the faggots they sell to the bakers.

The leaves that have fallen have enriched the soil a little, and the roots have woven it together so that it has a consistency. After this rye and even buckwheat will grow without more manuring. Now he will be able to commence a series of crops, and as soon as he can grow clover and potatoes he can keep cows, and has transferred a sand heap into a pretty farm. But before the broom was planted, the patch was surrounded by a ditch, and where the land is so situated that no other means of irrigation are possible or within their means, it is done by a series of troughs, which are nothing more than trees roughly scooped out which are laid for fifty miles, with branches in every direction, to accommodate different farmers. The labor seems incredible, but occupies the hours which they can devote to nothing else, and is performed cheerfully, though the reward is years in smiling upon their efforts. These troughs bring the water, but the land receives it at their hands in the same way as the bleechers water the cloth.

In large fields of cabbages, turnips, or cauliflowers, the whole looks like a garden—not a stone or weed to be seen, and in fields of grain, on the borders or through the center, where the path must go, every stem is carefully secured to stakes or dry branches of trees, to prevent its being injured in passing. Plants are not *in hills*, but in *hollows*, into which manure is put, and water, every day that it does not rain.

High Feeding—Renovation of Exhausted Lands.

By "exhausted lands" we mean those which do not produce full crops of grain and grass, such as were grown when they were first brought under cultivation. "Manure," says JOHN JOHNSTON, in a letter to the Secretary of our State Ag. Society last winter, "Manure is the one thing needful, after underdraining, for making profitable farming. High feeding would make higher manuring, by both making a larger quantity and a much better quality. If I had all the officers of your Society here, I do think I could make them strong in the faith that it pays, thoroughly to feed young cattle and sheep, so that they are worth more at two years than an immense majority of the cattle in this State are worth at four years old. I can show any man that is open to conviction, proof positive, both in my own stock and one of my neighbors." Mr. J. adds:

"It is higher feeding and higher manuring that is to renovate our exhausted lands of Western New-York. It was over-cropping and no manuring that exhausted them, and a contrary course will again renovate; but it will take time to do it—yet if every one would make a beginning it would soon be done—one would stimulate another to action. If you were to offer premiums for the stock wintered in the best condition, the farm and stock to be viewed in April, it might do much good. I don't mean that breeding stock would be kept in condition for the butcher, but in a good thriving state, such as they are generally kept in good pastures; but all stock that is intended for the butcher's market, whether in one or two years, ought to be kept fat all the time from three weeks old until they go to market."

That the course advised would enrich our farms more rapidly than any other, no farmer of experience can doubt. We must feed out our coarse grains upon the farm, if we would make them productive; it will not answer to starve our stock that we may have a little more corn, oats, and barley to sell—we starve our land thereby, and reduce our means of making good and profitable crops from our farms. We copy the above extract as a seasonable reminder on the subject, and hope it may be generally heeded.

Yellows in Peach Trees.

EDS. COUNTRY GENTLEMAN—I notice in your paper of the 13th Oct., a query from "A Subscriber" in Coshocton, Ohio, as to the cause and cure of what are called "Yellows" in peach trees—to which you reply, "its original cause is unknown."

I think the cause is a want of iron in the soil—but whatever the theoretical cause may be, if "A Subscriber" will carefully remove the earth from the roots of a tree having the yellows, and pour on them half a peck of iron scales gathered around a blacksmith's anvil, and then pour a pailful of water on the scales and replace the earth, he will cure the disease

L. V. BIERCE. *Akron*, *Ohio*.

Maryland State Fair.

Frederick, Md., October 27, 1859.

Editors Co. Gent.—I arrived here yesterday morning, and found the Maryland State Fair open, with a fine exhibition, equal I think to those I have previously attended at Baltimore. The attendance of people was as large as at the fairs held at Baltimore. Frederick is a very fine old city of about 10,000 inhabitants, situated in the midst of as fine a farming district as can probably be found in the U. States. It is decidedly the finest portion of Maryland, and the history of this section of the State shows it to be one of extraordinary fertility, and evidently well farmed. Farms in this district are selling when offered at from one hundred to one hundred and fifty dollars per acre. The show grounds adjoin the town, occupying the grounds attached to the old U. S. Barracks of Revolutionary fame, where the Hessian soldiers were confined. The barracks are in good order, and a portion of them used by the State as store-houses for arms, &c. About 15 acres are included within the enclosure. There is a very fair exhibition of stock. Mr. McHenry's and Mr. Bowie's Devons, Mr. Merryman's Herefords, Mr. McHenry's Alderneys, and some Short-Horns, grades, and working cattle, fully equal to former shows. A very respectable show of horses—among them the Cleveland Bay stallion of Dr. Woods of Virginia, selected by Sanford Howard, Esq., of the Boston Cultivator, and which does great credit to his judgment. He was very much admired, and I was gratified to be one of the committee to award the *blue ribbon*, which I wish might ever be as worthily bestowed.

The show of sheep and swine was very good, and some very choice ones in each of these classes. The implement show was a very good one—not as extensive as at some former shows, but of excellent quality. The other departments were very fairly represented, and the fair may be considered a decided success, and must be gratifying to President Merryman and his associates. The excitement at Harper's Ferry has diminished the attendance somewhat, that place being but a few miles distant; but I think from the attendance yesterday and the appearances for to-day, that the receipts will be satisfactory.

I met here John Jones of Delaware, who as ever, was ready for work—being engaged on several important committees—Mr. W. H. Sotham, and Mr. Granger of Saratoga, of our State. I met many Maryland gentlemen, among others, Mr. J. H. McHenry, O. Bowie, Col. Kimmill, Mr. Sands. Mr. Worthington, Col. Carroll, Mr. Goldsborough, and the President, Mr. Merryman, who was attentive as usual not only to the duties of the fair itself, but also to gentlemen from a distance, who were properly cared for.

The herds of Cattle were judged yesterday. Mr. Oden Bowie took the prize on the Devon herd, beating Mr. McHenry's Chicago United States Prize Cattle, which the Marylanders consider a great triumph—Maryland at Chicago beat the Union, and now a Maryland herd not exhibited at Chicago, beats the prize herd; some who were at Chicago I heard suggest, that possibly under other auspices, a different award might have been made—but one thing is certain, both herds were very fine indeed.

The Alderney and Ayrshire herd premiums were awarded to R. and J. H. McHenry; Mr. Merryman, the Herefords; and Short-Horns to John McCloskey. Mr. Howard McHenry's prize working oxen were first-rate, and hard to beat any where.

Mr. McHenry's South-Down Sheep were very fine, and received the first prizes. A trial of speed took place in the afternoon, and was not of such extraordinary speed as to have distanced the noted trotters, but yet quite fast enough to satisfy the farmers that some good roadsters were exhibited before them.

On the return of the Excursion train from Frederick yesterday afternoon, to Baltimore, the pickpockets did a paying business, while the passengers were crowding in. In the car in which I was, two gentlemen who were in company with me were relieved of about $250, another of $60, and in the adjoining car another of $180, and so on—and the marauders escaped. It is hoped the good people of Frederick may have arrested some of them.

I was very much gratified with the Fair—it is evidence of progress—and the intelligent farmers, their wives and daughters, there examining with much interest the various departments of the exhibition, showed that this effort of the Society was appreciated and would result in good.

The weather was quite chilly yesterday, and last evening a cold rain storm set in—but all is fair this morning, and I think the day will be a successful one.

The reception always extended to visitors from the North is ever most cordial, and I very much regret that I could not accept several pressing invitations to visit gentlemen at their farms and plantations. Farming is evidently decidedly advancing in Maryland, and I have rarely met gentlemen more intelligently engaged in advancing the best interests of agriculture, than those I have met here. May the good work go on until our whole country is redeemed, and made to be what it should be under a good system of farm culture.

I was glad often to hear our friend John Johnston spoken of as having done great good by his example, and by his writings to the farmers, giving his practical experience, which many I am certain are considering with great interest, and preparing to follow as far as their circumstances will permit. J.

Pitting Cabbage.

Eds. Co. Gent.—As the time of year is upon us for burying cabbage, I herewith send you my plan. Commencing on one side of the patch, I pull up the second row, and set it along side the first; I then take the plow and run two light furrows, the same as finishing a land, but not quite so deep; then I put a light layer of long straw, lengthwise, in the bottom of the furrow; then I begin at one end, set one row—that is, I set one row on the straw as close as I can pack them together, inverted. I then take the plow and run two furrows on each side of the row: the first furrow on each side of the row I run with two horses, and plow as close to the row as I can turn a heavy furrow, which covers the row all under except the roots, and the second furrow on each side I run light, and throw part with a shovel on the top of the ridge, to make it sharp, which completes the row. We have marketed cabbage in April, perfectly sound, except the outside leaves, managed in the above manner; but the cabbage must be dry and the ground in good working order when put up. Market Gardener. *Pittsburgh.*

Milk without Butter—A Remedy.

A French agriculturist mentions cases of cows whose milk, otherwise of good quality, lacked the butter-forming power, even to so great a degree, that if mixed with the milk of several other cows, the product of butter would be very small and of inferior quality. Such, to some extent, we have known to be the case. The writer above mentioned, says that cows usually giving milk rich in butter, sometimes, though well kept, yield inferior milk, and that he has found the following a successful remedy: It consists in giving the animal two ounces of the sulphuret of antimony, with three ounces of coriander seeds, powdered and well mixed. This is to be given as a soft bolus, and followed by a draught composed of half a pint of vinegar, a pint of water, and a handfull of common salt, for three successive mornings, on an empty stomach. A single dose is usually followed by an improvement in butter, gradual but permanent in results.

Ham for Summer Use.

Cut in slices ready to fry, pack snugly in stone jars, and cover with lard barely warm enough to run. Of course, as the meat is used, the layers remaining must be kept covered.

Wintering Farm Stock—Horses.

The care of his domestic animals is among the first in importance and continuity of the winter labors of the farmer. He must be "on hand," early and late, in the stable and stock-yard—horses, sheep, swine and poultry look to him for food and protection. A considerable portion of the warmer season is employed in preparing their winter sustenance—in cultivating and harvesting a supply of food against the inclemency of winter. The one is a season of ingathering; the other, of scattering abroad;—youthful Summer hoards, that aged Winter may consume, and it is thus in all the varied concerns of life, if wisely ordered. The latter season is now upon the farmer—the supply gathered with so much care and labor, must now be given out to his dependants, from day to day, and from hour to hour, as their necessities require. A wise economy in the care of stock is of the first importance, for the thrift of the animal and its consequent profits are best studied when its comfort is cared for by a just attention to every want, in a timely, liberal, and yet not wasteful manner.

We propose to offer hints bearing on this subject—timely hints—reminders of the neglectful—instructors of the ignorant, (but how few there are who do not *know* far better than they *do* for their stock,) and shall commence with that usually first brought to the barn—the horse.

The horse is one of the most valuable servants of the farmer. His health and comfort, and consequent ability to labor, are worthy of particular attention. Good stables, warm, but light and well ventilated, go far to promote this end. Proper care and cleanliness, and regularity in feeding, are also necessary. Hay and oats are the best and most readily available food of the horse, and are mainly depended upon for this purpose. Other grains and fodder, also roots and fruit, may sometimes be employed to advantage. Straw, cut or chopped, and meal of rye, corn or barley, or a mixture of these, wet and mixed with the straw, are frequently used with fair results. They furnish a cheaper food for horses when hay is very costly, in proportion to grains, as is sometimes the case. Carrots are the best roots for horse feed, and are thought to be of great service in promoting the health and keeping up the appetite. Potatoes and turnips are sometimes used, but they should first be cooked, and then tend to fatten rather than to strengthen a horse. Apples are readily eaten, and those who have given them to their horses speak favorably of their effects.

As a steady food for the horse, hay and oats are the best, unless particular care with other foods is given to their feeding and management by one skilled in the business. To those who employ hay and oats, we would commend an occasional change from oats to carrots, apples, etc., as such will be relished by the animal, and promote his health and power to labor. Instead of grain twice or three times a day, give one feeding of them, and try sometimes a feed of cut hay or straw and meal, for animals like to change from one kind of food to another as well as human beings.

Regularity in the hours of labor, of feeding and rest, are always desirable. Plenty of pure water should be supplied at least twice a day, and it would be of service to the horse could it be brought to a lower temperature than merely below the freezing point. When brought in from work, warm with exertion, the horse should be rubbed down and then blanketed; but we would not blanket a horse in a good stable, as a general rule, except in extremely cold weather. When standing out of doors while in harness, horses should be blanketed, and given a place sheltered from the wind, if possible; many horses are ruined from negligence in this respect.

In the care of horses, a few farther points may be hinted upon. A sharp-toothed curry comb is the dread of a fine-skinned horse, and the brush and straw wisp will answer the same purpose much better, if used as frequently as they should be. Mud should never be suffered to dry upon the legs of a horse; it is the cause of half the swelled legs, scratches, and other affections of the feet, with which they are afflicted. Want of air, light and cleanliness; poor hay and insufficient or indigestible food, are all fruitful sources of disease—and a proper attention to these points will be of far greater service in restoring and keeping up health and vigor, than the thousand and one medical nostrums so often relied upon. Proportion the food, in amount and character, to the nature of the service required, and your team will not fail you, but will keep in uniform order, and be ready in the spring for the steady work then called for, and so important to the prosperity of the farmer.

These hints are intended to apply mainly to working horses—to those kept upon the farm for the ordinary purposes of the same. Colts and horses not in use, will not require the same amount of care, but their comfort and thrift should receive careful attention, as their future value depends largely upon the foundation now laid.

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Pea-Vine Clover.

Messrs. Eds.—In the Co. Gent. of 13th of Oct., Mr. J. A. Lawton inquires where he can get the seed of the pea-vine clover, and at what price per pound, and wishes some one would answer through the Country Gentleman.

For his information permit me to say, that I presume he can obtain it of Charles H. Bartlett of Freemont, Ill. His post-office address is Diamond Lake, Lake county, Illinois.

In the spring of 1857, he forwarded to me a bushel of the true mammoth or northern variety of clover seed, a portion of which was sown with spring wheat, as also with oats. In 1858 it produced an enormous crop, as it did again the past season. Early in September, I forwarded to the publisher of the Boston Cultivator, a sample of this clover, which measured over five feet in length.

Something over a year ago some one inquired through the Co. Gent., where he could obtain this variety of clover seed. Through the columns of the same paper, I referred him to C. H. B. Last winter I received a letter from him, stating that in consequence of my notice of his clover seed, he had received scores of letters in reference to it, and readily disposed of his whole crop, (50 bushels,) samples of which had gone into nearly half the States of the Union. He sold it at seven dollars per bushel, bagged and delivered in Chicago. L. Bartlett. *Warner, N. H.*

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Gapes in Chickens.

A writer in the Rural New-Yorker says that he has found by accident, that "dough raised with milk rising is a sure and safe remedy for gapes in chickens, fed while fermenting, but while still sweet." He has tried it for six years, but says that where he seasons the feed of his chickens with salt, as for cooking, they never have the gapes.

Culture of Indian Corn.

EDS. CO. GENT.—It may be entirely out of season now to give either my own practice or that of my neighbors in cultivating this important cereal, but as the modes and results are so widely different I am constrained to give them. My neighbors plow about four inches deep; I do eight or more. We plant in a similar manner. As soon as their corn is up so they can follow the rows, they run a plow through it, turning the earth from the young plants, and in a week or so run the other way, turning the earth as at first. They then throw the earth back to the corn, and this time plow four furrows in a row, and at the fourth plowing four furrows more earth to the corn. This is the usual amount of cultivation, though some give two furrows more one or both ways, making in all twelve to sixteen furrows to a row; and as they plow their corn with the same implement they do the field, and the same depth, they prevent its roots from running over the ground, and by throwing the earth to the large plant compel it to put out brace roots as long as they plow. In plowing I have seen the root wilt down as fast as they went through the field in the process of severing the roots, almost as plainly as though every plant was cut off just below the surface, yet they kept on piling the earth around the plant which must form into root until a rain comes, which running down the blade and stalk washes the earth away, and a new process commences of turning the root to stalk again.

My method is to have my ground in as good a condition as possible, and as soon as the plants will bear it to hoe them with a hand hoe and earth them up slightly; then I run Sayre and Remington's horse hoe once through each row; in process of time the other way, following with another hand hoeing, which usually completes the cultivation. If the earth needs more stirring I run the horse hoe through the third time, being careful not to let it run deep.

I look upon this implement as the great desideratum in corn culture; its perfect adaptability to run the required depth and width, and to turn the furrow to or from the grain as desired, (to say nothing of its use as a double shovel plow,) must bring it into great favor wherever it is introduced.

I am under great obligations to the COUNTRY GENTLEMAN for recommending it to its readers as the "best" machine in use. It has saved me more dollars this season than the Co. Gent. will cost for years to come. Now for the result—my neighbors have got a good crop of weeds, and say they will have about 30 bushels of corn to the acre, though some fields I have seen will not yield one-half the amount, though the cockle is a splendid crop. I have carefully estimated my crop (from a small portion of the field,) and shall have upwards of sixty bushels to the acre; my ground is clean and free of all weeds.

One word more about deep plowing. A neighbor plowed his tobacco ground about 3 or 4 inches deep. I did mine, on similar ground, as near to 10 inches as I could. His tobacco wilted day after day before the sun, while mine was as fresh at noon as at sunrise, and now our crops are in proportion to the plowing F. J. W. D. *Bourbon, Missouri, Oct.* 1859.

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IOWA STATE AG. SOCIETY.—We are indebted to WM. ALLEN, Esq., Davenport, for a copy of the Fifth Annual Report of the Iowa State Ag. Society, for 1858, by J. H. WALLACE, Sec'y of the Society. It embraces the doings of the State and County Societies, several Prize Essays, and a Register of Short-Horn Cattle owned in Iowa, intended as the first part of the Iowa Short-Horn Herd Book, to be continued in the future Reports of the Society.

Top-Dressing Grass Land.

As this subject has attracted considerable attention of late, we need make no apology for our frequent reference to it, especially when we can present fresh facts and long experience, as in the present instance.

A writer in the *Boston Cultivator*, giving the result of twenty years attention to the practice, says that on "natural mowing," or the moist meadows of Western Massachusetts, the best way is to apply fine manure in October and November, at the rate of from ten to twelve loads per acre; and better results follow when it is spread immediately. "In this way it works down among the roots of the grass, and is in a situation to cause it to start early and grow rapidly in the spring." Applied thus every second year, his meadows have given two tons of hay per acre as the first crop, and if not fed off, one ton as the second.

The top-dressing which prejudices farmers against this mode of applying manure, is usually like the following: Green manure is taken in the spring from the yard, and spread upon the meadows. "It dries up and is in a condition to be gathered in hay-time with the horse-rake, and carried into the barn in dried lumps rather than in the form of an increased crop of hay." Whenever applied, the manure should be fine, and it is universally conceded that autumn is the most favorable time for the application. If the land can be irrigated a much greater result will be produced.

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Experiment with Potatoes.

EDS. CO. GENT.—Last spring I advised a number of our farmers to try growing potatoes from sprouts, from a single eye in a hill, and from what would be considered no eyes. One gentleman only tried, that I am aware of, Mr. James F. Adams, who, like myself, is fond of all new experiments. He selected three potatoes, pared them, and planted a single eye in a hill. From one hill he dug for exhibition at our fair, 32 good-sized potatoes, medium and large. We then pared a second time the meat of the potato, and cut pieces immediately under each eye, and planted one in a hill, and from one hill dug as before, and obtained 16 fair-sized potatoes. Perhaps this may not be new to your readers, but was to us here. The yield was large per hill, no matter how planted, and is a great saving of seed and worthy of further trials. The ground where the first was planted, was richer than the other. ISAAC DILLON. *Zanesville, O.*

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Best Grasses for Dairy Farms.

In answer to the question put by the State Ag. Society, to the competitors for premiums on dairy farms, "What kinds of grass are best adapted to lands used for dairy purposes?" Mr. Jackson, of Lewis Co., (owner of first premium farm,) replies: "Timothy and red and white clover are best for dairying; for hay, I cut my grass as soon as out of the blow." Mr. Standring answers, "Timothy is best." The other competitors use timothy and clover, but express no opinion upon the question stated above. Mr. Clift, of Putnam Co., has considerable permanent grass land, originally seeded to timothy and red clover, on which "red top, blue grass and white clover have come in spontaneously—and the mass of herbage now presented is very close and fine, making an excellent quality of hay, as well as the best of pasturage, the natural growth being esteemed superior for feeding either cattle or sheep, or for keeping the former for dairy purposes."

Farmers's Conversational Society.

The aim and end of all societies and associations, is that their united efforts may be put forth more judiciously, and with greater earnestness, for the promotion and perfection of the object in view. With the social gatherings of farmers in country villages and rural districts, are connected many advantages, not the least of which is that the familiar and generous principles are brought into action; and while each aims for advancement in practical farming, they also strive for each other's usefulness and prosperity. If a dozen or a half a dozen neighbors are willing to assemble by turns at each other's homes—taking with them their wives, or a substitute—spend the evening in conversation upon agricultural topics, in which the ladies may join when such subjects as the making of butter and cheese is talked of—eating some choice fruit, and dispersing to their own homes at an early hour—if this is done, I do not see that a *constitution* and set of *by-laws* could any better govern them than their own mutual agreement and consent; certainly the less display and form there is to the society, the better will be the results, and the further will the object in view be promoted. But if it is necessary, the more simple such a code of government, the better.

The inquiry on page 256 of the present volume, has suggested these thoughts, and I therefore copy for the benefit of those who wish for a simple form of constitution, a code which has for several years governed one of the most active and hard-working Farmers' Clubs in the State. It is presented as a form, not as a model, and can be altered or amended as is considered best for different localities.

PREAMBLE.

"For the purpose of mutual improvement, and for greater advancement in a correct and practical understanding of a better system of farming, founded upon experience and the result of known facts, we the undersigned, form ourselves into an association, to be governed by this

CONSTITUTION.

Art. I.—This Society shall be known by the name of the "Farmer's Conversational Club of ——."

Art. II.—The officers of this Club shall consist of a President, Vice-President, Secretary, and Committee of Arrangements.

Art. III.—It shall be the duty of the several officers to perform the duties usually pertaining to such office.

Art. IV.—The Committee of Arrangements shall have the general superintendance of the business of the Society, select topics for conversation, and announce the same two weeks in advance.

Art. V.—Any person may become a member of this Society by signing this constitution, and complying with all needful regulations and by-laws.

BY-LAWS.

1.—No member of this Society shall occupy more than fifteen minutes at any one time, either in a written article or in remarks, before the meeting, unless by permission of the members.

2.—Each member of this Society shall consider himself under obligation to do his own part towards its maintenance and support.

3.—Officers shall be chosen annually by ballot, or semi-annually if necessary, and shall serve until others are chosen in their stead."

I will only add, that farmers should lose no time in forming themselves into a society or club for the promotion of their best interests and truest welfare, to be governed by the above or any other constitution. S. L. B. *Brookdale Farm, Maine.*

Apples for Milch Cows.

In the *Cultivator* for September, 1850, was given a number of interesting experiments in feeding different animals on apples, as well as tables of the chemical analysis of several different varieties of this fruit. In regard to employing them as food for milch cows it was remarked: "A peck of apples per day, fed to a cow, has been found to add more than a quart to the daily quantity of milk, besides greatly increasing the richness, as well as improving the condition of the cow." We quote this remark as a reminder to those who have plenty of apples of inferior quality for market, that they may not think them worthless save for cider-making. A further quotation from another source may also be useful.

"There is a great prejudice," says an experienced New-England dairyman, (in one of the County Agricultural Reports or Transactions,) "existing in the minds of many farmers against feeding apples to milch cows. Apples, they say, 'dry them off.'" This erroneous conclusion is the result of mismanagement. Apples fed in too large quantities at first, operate like a surfeit of all other kinds of food, which produces inflammation, and thereby decreases the quantity of milk. Four quarts a day for a cow is sufficient to begin with. This quantity may be gradually increased up to a bushel per day for each cow, with profit. By way of experiment we fed five cows six days, with a mixture of sweet and sour apples, a peck to each, night and morning; and during the six following days they received an allowance of three quarts of meal each per day; and the yield of butter was about equal in both cases."

Our own experience in feeding cows on apples has convinced us that they were about as valuable as any of the roots so much recommended for the purpose. In raising, preserving, and feeding out, we have been far the most successful with the former. TYRO.

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Cooking the Apple-Pie Melon.

EDS. CO. GENTLEMAN—I see some account of the Apple-Pie Melon, with an inquiry by H. G. W., Oct 20th, as to how "pies and preserves are made from them." Mr. Gardner of Illinois, Mr. Norris of Ohio, and several others, have furnished us with their experience, and by following their directions we have succeeded in making a complete counterfeit apple-pie, not to be distinguished from the genuine.

Cut and pare as you would pumpkins. Stew until thoroughly done, and if there is too much water in them, turn them into something to drain, and when dry enough use them just as you would stewed apples, adding sharp vinegar or tartaric acid to give the tart.

The Apple-Pie Melon is one of the most valuable acquisitions to the list of vegetables in the west, that has been made for a long time, as they grow finely and produce wonderfully. I planted fifty seeds—thirty came up, and the frost on the 4th June left me fifteen vines. About one hundred melons set, and about forty of them were cut short by the frost 1st Sept. My largest one weighed fifty pounds, and one of my neighbors to whom I gave seed, raised one weighing 53 pounds. They are made valuable here because fruit is scarce—where fruit is plenty they must be of less value. SAML. M. DYER. *East Desmoines, Iowa.*

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Plum Pudding.

Three cups of bread crumbs—1 cup of flour—1 of brown sugar—1 of finely chopped suet—1 of chopped raisins—1 of milk—a little salt—1 teaspoonful of soda—2 of cream of tartar. Boil from three to four hours, in a cloth or mould. NANCY.

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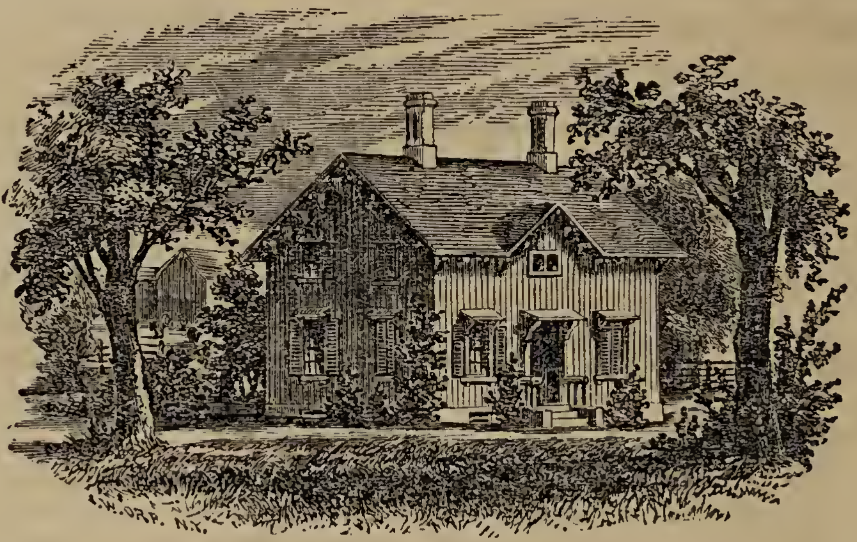
PEAR CULTURE.—The Yates Co. Chronicle states that Mr. T. G. YEOMANS, of Walworth, has this season sold, from one-third of an acre of pears, over $500 worth of fruit.



Plan of a Farm-House.

A correspondent asks for the plan of a dwelling which he is about to erect, to contain a parlor, a sitting or dining room, library, a bed room, kitchen, hall, with the usual closets, pantry, &c., all on the ground floor. He he has searched through books on rural and domestic architecture, but does not meet with the object of his wishes, every one being either too small or too large, or if adapted to his wants, their cost places them beyond his reach. He remarks: "The library I would be glad to have placed in some retired corner of the house, convenient of access from out-doors, and the kitchen and sitting room. The plan which best suits me, is one published in 'Rural Affairs,' p. 133, but the study or library is not in a sufficiently retired position. There is also a plan in Downing's Country Houses, p. 304, which, if made smaller, would adapt itself well to my wants, with the exception that I cannot heat the library with a furnace."

The plan mentioned in "Rural Affairs," has two objections. The kitchen wing is too wide—making a broad, awkward roof to adjoin the narrower and lighter roof of the main portion of the dwelling. The kitchen being flanked with other rooms, cannot have that perfect light and ventilation which exists with opposite windows. We have therefore made the accompanying plan, (Fig. 1,) which we trust will suit our correspondent, and perhaps be useful to others of our readers. It will be observed that the entrance hall gives access to every room on the main floor, except the bed-room; that the pantry is accessible to both kitchen and dining room,—to the latter by a small square door in the wall, opposite a broad shelf in the pantry; that the library opens, both into the hall, and by an entry into the kitchen, and out doors,—and is also easily accessible to the dining room by crossing the hall. From the desired position of the library, we infer that it is intended to answer the purpose of an *office*, or place to do business, which every farmer should have, if he does not wish to make bargains, settle with hired men, &c., in the midst of his family, or among the pots and kettles of the kitchen. The bed-room may be made larger, by reducing the width and increasing the length of the pantry; and the suit of rooms in each end of the house may be reversed, if desired, in order to command properly the prospect from the windows. It will be observed that the main entrance to the kitchen is on the right side; and if kitchen stairs are desirable, they may be placed on the line of the "back pantry." The kitchen room may be continued on, to form a wood house.

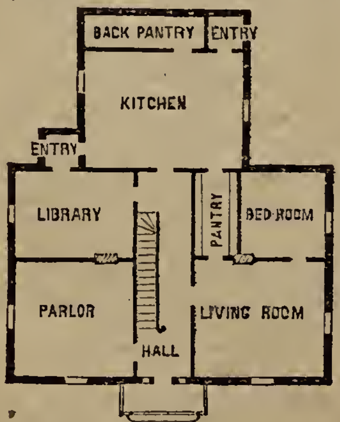


Fig. 1.

The second floor gives four spacious bed-rooms, and a large closet may be made at the back end of the upper hall. If the house is built story and a half, large closets may also extend along the whole length of the house on each side, next the eaves, they taking away from the rooms the low portion next the roof. The perspective view of a dwelling at the head of this article, to which this plan is well adapted, is built in the battened style, but is equally capable of execution with stone or brick.

As suggested by our correspondent, we have omitted to give the dimensions of the rooms, as he can thus adapt the size of each to his wishes; but for a common farm house, costing about fifteen hundred dollars, the dining room and library might be about 16 feet square, the library 11 by 16, the bed-room 11 feet square, and the kitchen (the main and most important room of the whole house,) 16 by 20 feet.

We may add, that if the mistress wishes to be easily accessible at all times to the kitchen, in order to superintend or do her own work, a door way may be made between the bedroom and the kitchen, if the latter is built a little nearer to that end of the house.

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Salt for Stock.—A correspondent of the Boston Cultivator says: My practice is to keep salt and wood ashes where horses can have access to them in the stable. I also keep salt in boxes, in my cattle and sheep sheds, during the time they are kept up; and I make salt boxes with roofs to them, to stand in my sheep pastures, with an opening on one side for the sheep to put in their heads. I mix in a little tar and sulphur with the salt for sheep, deeming the mixture healthy for them. My conviction is, therefore, that salt should be put where stock may get it when nature requires. Hence my practice.

Foreign Editorial Correspondence.

The Three Imperial Schools of Agriculture.

Grand-Jouan is one of the three chief Agricultural Schools of France. Count KERGORLEY, whom I had seen at Paris, was good enough to provide me with a note to M. RIEFFEL, the Director. M. R. has been engaged here for twenty-five or thirty years I understood, in the amelioration of land originally almost barren, but which he has at length brought into quite a productive condition. He had been in the habit perhaps of taking pupils before his establishment began to receive governmental support, but for some years past the institution has been, like Grignon and La Saulsaie, entirely in the hands of the "Ministry of Agriculture, Commerce and Public Works." It was an unfortunate day for my visit, for much of the stock had been at the show at Nantes and was not yet returned, and the Director himself was engaged with a board of inspectors or other functionaries, so that I only saw him for a moment. He deputed however a very gentlemanly pupil, in his third or last year at the school, to show and tell me all he could, who proved an obliging guide, and very patient with my bad French and numerous questions. Learning that I came from America, he told me that there was a "compatriot" of mine at the school, and suggested that it might help matters to find him. Of course I assented with pleasure, but my hopes were all put to an end when my fellow American turned out to be a Cuban Spaniard, who knew no more of English than I did of Castilian.

The farm of Grand Jouan, embraced, I was told, four hundred hectares, or a thousand acres nearly, and there were at the school about 25 students only—sixty being a full complement. Only boarding students are received here, or at either of the other imperial schools. To enter one must be either French by birth, or a naturalized citizen, and at least seventeen years of age. The government, however, occasionally permits foreigners to enter, reserving the right of designating the school they shall attend. Any one desirous of entering must equally address his request to the governmental bureau of Agriculture, enclosing his certificate or register of birth, with testimonials from the mayor of his place of residence, that he is "of good life and morals," and from medical authority that he has been duly vaccinated, together with a satisfactory bond to guarantee the regular advance quarterly payment of the 750 francs ($150) per annum, which covers the whole expense of the school for food, room rent and bedding, medical care, fires, lights and washing. The whole country is divided into three districts, and although a student may select either of the three schools at pleasure, still, unless he goes to the one situated in the same district in which he resides, he forfeits his right to obtain either of the scholarships offered to competition. After obtaining from the Ministry of Agriculture authority to present himself as a candidate for any existing vacancy in the school he desires to enter, he must undergo an examination (unless already possessing the degree of bachelor in science) before a jury annually nominated by government to commence their sessions October 1. At this date the pupil repairs to the institution, and is examined in arithmetic, comprising all the rules usually embraced in our more advanced text books, in geometry equivalent to the first four books of Legendre, in physics upon the general properties of bodies, the thermometer and barometer, and in a French exercise calculated to show his proficiency in the orthography and grammar of the language. The number of new admissions being limited, the order of merit upon this examination is recorded and those standing first have the first vacancies that occur.

At the end of three years' study, those who finish the course creditably receive a certificate, and I understood that those who rank as the first in their class, are entitled to certain privileges for two years in the public or private agricultural schools of the country. Examinations are held semi-annually during the course, and any student not qualified at the end of the year to advance into the next class, is excluded from further attendence at any of the three institutions. The instruction is both theoretical and practical—the former comprising a course, 1, in physics, chemistry, mineralogy and geology as applied to agriculture; 2, in rural engineering; 3, in cultivation; 4, in agricultural zootechny and zoology; 5, in forest culture and botany; 6, in rural economy and legislation, and 7, in practical knowledge of accounts. The practical instruction, the importance of which is justly considered very great, is both manual and mental, including the use and management of tools, instruments, vehicles and machines; the direction and execution of the principal operations of agriculture, plowing, sowing, haying, harvesting grain and roots, the care of stock, &c., &c., also exercises in linear drawing, in surveying and mapping, in levelling, in computing solids, gauging liquids, &c., together with the more usual manipulations in the laboratory, such as testing marls, analysing soils, and valuing manures. The students are charged in turn with the superintendence of all the details of cultivation, of which they should render a report; they take excursions to forward their agricultural or botanical studies, to extend their knowledge of forests and geology; their instruction is promoted by observation and demonstration in the stud and in the stable, as well as in the field. The course as thus sketched out, is obligatory upon all, and not a matter for individual selection and preference. A part of August and the whole of September compose the annual vacation.

This general course is the same at the three Imperial Schools of Grand Jouan, Grignon and La Saulsaie. In each there are eighteen scholarships, distributed exclusively according to the results of open competition among the students—nine of them, however, being reserved for a certain class of the pupils, former apprentices in the farm-schools, who on the completion of the apprenticeship obtained honorary certificates and passed the preliminary examination required at the Imperial institutions, and who enjoy the scholarships they obtain from the very time of entering, instead of, as the others do, one-half at the end of six months, and the whole at the end of not less than a year.

We walked about the farm, looking at the crops and buildings. The wheat, of which they had seventy or seventy-five acres, was looking very well; fifty acres or thereabouts were covered with the profuse yellow blooms of the colza or rape plant; there were eighty or ninety in oats, for which the soil was particularly kind, almost invariably yielding well. They were also growing some barley and rye. There were a hundred and seventy-five or two hundred acres in hay,—the appearance of the grass being rather weedy, I thought at the time, judging from the profusion of flowers scattered through it, although from inquiries subsequently made it is not impossible that these were visitors on invitation or at least on sufferance, instead of being intruders as I supposed. There was a considerable area devoted to experimental plots, where all sorts of new seeds and varieties were being tested. About forty-three bushels per acre, as nearly as I can compute, was stated to me as a maximum yield of wheat; while the average one year with another was about twenty-three. The yield in 1858 had averaged 22 hectolitres per hectare for the whole area in wheat, *i. e.* about 25 bushels per English acre. Sometimes oats will produce eighty bushels per acre, but the average is nearer forty-five. The land is not so good for grass, and a ton and a quarter per acre is a fair crop. Twenty-seven bushels of rape seed or thereabouts will be harvested from an acre, valued at about 22 francs, say $4 40 per hectolitre, which is about 2 5-6ths bushels. Twenty four tons of carrots were dug to the acre in 1858, and twenty-two in 1857; they ordinarily cultivate fifteen to twenty acres in this root.

The Nursery of Andre Leroy at Angers.

This establishment is probably the most extensive of its kind in Europe. It began like others in a small way, and since its foundation upon two or three acres in 1780, it has continued to increase until at present the home grounds occupy about 250 acres in the *commune* of Angers, and at a convenient distance from the railway station, while several miles away from the city, near the village of Alleuds, there are 125 acres more under similar cultivation. The soil in the grounds I visited was described to me as a clayey slate, its general depth being about 3 feet; while that at Alleuds was said to be calcareous, and but from 12 to 18 inches deep. Upon the former they grow particularly the seeded and berry-bearing fruits, such as pears, grapes, cherries, &c., ornamental and evergreen shrubs, roses camellias in open air, conifers, oleanders, and indeed everything that requires more especial care and watchfulness. The distant grounds are devoted to the stone fruits, the large forest and shade trees, &c. In answer to my inquiries, I found that the number of hands employed varies from 250 to 300, according to the season, about one-fourth of whom are at Alleuds; six horses are engaged constantly in cartage, &c., and the manure of 300 horses is annually consumed, contracted for from the cavalry barracks.

The culture of fruit trees occupies the larger part of Mr. Leroy's Nurseries, and he has collected about 2,500 different species and varieties, the whole of which however do not figure in his catalogues, because some are still on trial, and others considered inferior, but they may all be seen on the specimen grounds, the appearance and management of which I could not but admire. There are also specimen grounds of the forest and ornamental trees, to the number of nearly 3,000. These specimen grounds are justly regarded as the only sure guaranty of correctness, and it is to the collections they contain,—each individual plant plainly labeled with its name—that the establishment is thought to owe much of the wide and favorable reputation it enjoys.

The number of fruit, forest and ornamental *trees* sent out each year rises above 600,000; that of *young plants*, such as pears principally among the fruits, with some plums and others—together with the forest and ornamental trees, conifers and shrubs of all sorts and ages, is calculated at full *ten millions!* But the finest sight to me were the rose fields, for I cannot apply any other word to the long ranges of beds which contain by the thousand, these favorites among flowers, the world over. Standards grafted upon briars, dwarfs, and the vast remainder which flourish and blossom upon their own natural roots, to the number altogether of more than a *hundred thousand*, cover seven or eight acres in one body, upon a gentle incline, presenting to one who sees them in the full bloom of May quite as beautiful a sight as the most fanciful would imagine, while I presume I am perfectly safe in saying that the collection, in character as well as extent, is one of the finest and most celebrated in France.

The camellias, already alluded to as cultivated in the open air, appear to flourish admirably without shelter—the only precaution being to plant them toward the north, in the heather soil so much employed for all potting purposes, and with a hill of sand about the stalk of the plant. The only evidence of success necessary is to know that some of the trees are over thirty years old, and that the number of blooms each year is such that the branches bend down under their weight.

Perennial plants occupy another separate square where three or four hundred varieties are grown for ornamental purposes about the dwelling house and garden; still another is devoted to trees already so large that they must be transplanted *en panier* to the lawn, a mode, as I understand it, of confining the roots and earth taken up with them, in basket-work during removal.

Beside the above details, I think it may interest the reader to know something of the systematic way in which the nursery operations are carried on to secure the order and care necessary where there is so much requiring attention. There are in the first place twenty *chefs* or overseers, each charged with a department of his own, as for example, one to look after the seed fruits, a second for the stone fruits, a third for the berry fruits, a fourth for forest trees, a fifth for roses, and so on, each responsible for the selection of subjects and the identity of species. Every evening these *chefs* come together at the office to report the work performed during the day, and receive orders for the morrow. Five clerks are kept busy at the office, who prepare the subdivision of the work for the overseers, and by this means it is all performed without hinderance or obstruction.

The Catalogue—Business in the U. S.—A New Label.

All the 2500 specimen sorts in the trial grounds are fruited, and their fruit must be carefully examined, drawn, tasted and described; already figures of more than a thousand of them are collected in Mr. Leroy's Albums, and this exact reproduction on paper of the fruit itself, with the accompanying notes, are made use of in the preparation of the Annual Catalogue, printed in both English and French. One of the features in the Catalogue to which my attention was called as both a novel and a useful one, is that of giving in connection with each variety the name of its originator, as an earnest of its identity, together with its different synonyms and the names of the authors who have described or promulgated it under each, in order to prevent confusion in nomenclature. In perfecting this labor of arranging synonyms and clearing up the chaos of horticultural nomenclature, great labor has been expended and all the works of the best pomologists of France, England, Belgium, the United States, &c., I was assured had been carefully examined and sifted.

The period of sending out trees begins with the last of September and continues constantly until May. During the year the weight of trees sent out is estimated at from fifteen hundred to two thousand tons, or from seven to ten tons daily.

It is only about ten years since Mr. Leroy, finding the European market too small for his production, dispatched to the United States Mr. Baptiste Desportes, who is now associated with him in the proprietorship of the establishment, and whose visit many of our horticultural readers will perhaps recollect. This visit elicited a few scattered orders, but the resultant satisfaction on the part of purchasers was such that the following year orders from this country were tripled, and since then they have been constantly increasing; so much that special care is taken in growing stock for our market, and Mr. L. has now an agency in New-York city. One reason of his increased business has doubtless been the low rates of freight between Havre and New-York, arising from the warm competition between various lines. Trees in cases of 40 cubic feet each, (counted as a ton,) are carried over for from $3 to $5 per ton; a case of this size will contain three or four hundred pyramid pears two years from the graft, according to kind; seven or eight thousand quince stocks, or ten or twelve thousand pear stocks. Freight by the *steamers*, is from $20 to $30 per ton, and for delicate plants, such as roses, evergreens, &c, it is better to pay an extra price to secure their prompt delivery.

A little thing I saw at this nursery pleased me very much, namely, a label made of earthernware like that used in flower pots, stamped before baking with the desired name, and provided with a hole through which to pass the wire attaching it to the tree or plant. It is an original thing, I believe, and not only very simple and perfectly legible, but also remaining exposed for any length of time, to any treatment, without the least injury or change. L. H. T.

Inquiries and Answers.

Burning Brush.—I have cut down a piece of thick underbrush, with some small saplings, which was done in full leaf, and is now nearly dry enough to burn. Which would be the more destructive to future growth, fall or spring burning? A reply through the Co. Gent. would be appreciated by R. *Franklin, Va.* [There would perhaps be no perceptible difference between autumn or *early* spring burning—but by deferring the operation, should it be convenient, till early summer, when the new shoots have made their appearance, it would probably make effectual work of it, and destroy them all.]

Quince for Dwarfs.—Will you inform me through your valuable paper, what the objection is to using the *common* quince root for dwarfing the pear. What advantage is gained by dwarfing on the Angers root. Ignorance. [The Common or Orange quince is of less vigorous growth than the Paris or Angers, and is consequently more dissimilar to the pear. Hence dwarfs worked on the common quince, are feebler and shorter lived; and many varieties which do well on the Angers quince, fail entirely on the common sort. There are a very few pears which do pretty well on the latter, as Angouleme, Louise Bonne of Jersey, &c.]

Downing's Colored Fruits. — A corresponpent wishes to know where a copy of this work can be drocured. The edition was sold out, we believe, some years since, but perhaps some of our readers may be able to state where a copy can be procured.

Raspberry Seed—Protecting Trees.—Will you favor me with information in regard to the time and manner of planting grape, blackberry and raspberry seed. And I have a few peach and pear trees that I have placed straw around the roots, and covered the same with earth, and then placed hogsheads over the trees. Will the above treatment benefit or injure the trees? I supposed it would prevent them winter-killing. I have also covered my raspberry, blackberry and grapevines, raised the earth a little, and then placed the vines on it, then straw and earth on top; was it done too soon, or when should such things be done, and how? P. Myers. *Des Moines, Iowa.* [Raspberry and blackberry seed may be planted as soon as ripe and washed from the pulp, in rich soil three-fourths or an inch deep, shading the surface till moist autumn weather sets in, if the season is dry. Or they may be mixed with sand while yet fresh, and planted just before winter, or very early in spring. The seed of grape may be similarly treated, but planted somewhat deeper.

It is best not to cover raspberries, grapevines, &c., till winter is close at hand, as they will ripen and harden better if exposed till that period. Grapevines are often sufficiently protected if simply laying flat on the ground —or at most, with an inch or two of soil. The same remark will apply to the raspberry and blackberry. Caution is needed in the use of straw around fruit trees, as it may encourage the depredations of mice. If covering the stems, it should not be closely tied about them, as the circulation of some air is best. We should fear an inverted barrel would too closely confine the air, unless some air is admitted. Evergreen boughs placed about any tender trees, afford the best and safest protection. The thicker the coat they form, the more complete the covering will be.]

Self-Shutting Gate.—(*P. P. P.*) Winegar's self-shutting gate, worked by the descent of a heavy weight, by a revolving crank and pitman, and described in one of the early numbers of the Illustrated Register, has been in successful operation several years, and when well and strongly made, with a light wire gate that will not be retarded by wind, scarcely ever needs much repair. Another kind is Winegar's lever gate, a smaller weight being raised at each time by pressing a lever, and the weight working the gate. The price of the first is from ten to twenty dollars; of the latter about four dollars. We question if the contrivance of our correspondent will succeed—but we advise him to try it, as the only satisfactory proof.

Lime—Grass Seed.—Would it be advisable to apply lime to a piece of moist mucky land? If so, what quantity per acre. Also where can red-top seed be procured, and what is the price? D. C. A. [Lime is commonly used on mucky land after draining, and may be of some benefit in the case mentioned, if not too wet. Forty bushels per acre will be a good application; some, however, apply twice or thrice this quantity. Red-top may be procured at the large city seed stores, but we cannot give the price.]

Chufas.—Having seen in your welcome visitor, chufas recommended as food for poultry, and being ignorant of its nature, cultivation, &c., should take it as a favor if some of your contributors would state where to procure the seed, manner of cultivation, &c. B. B. *Kentucky, Oct.* 15. [We are unable to state where the seed can be now procured. To raise them, plant the tubers early in spring, in beds or in drills, say six inches apart in the drills, and cultivate as onions. They will soon come up, with grass-like leaves, and appear like coarse grass through the season, but produce great numbers of the small tubers at the roots. They must be dug and secured before the ground freezes, as freezing will entirely destroy them.]

Cement for Building.—I wish to know whether the artificial stone made according to the method named in your paper not long since—viz., two parts sand, seven parts small stone, and one part lime—will be a suitable material for constructing the walls of a barn? Some say that it will not stand the test of severe frost. Reliable information will be gratefully received. A. W. [Will those who have tried it please answer?]

Steaming Fodder.—*W. S. G.* We know of no work on this subject.

New Rochelle Blackberry—its name.—(*F. C.*) The correct name, *New Rochelle*, has been adopted in all American books on pomology, and by nearly or quite all the principal American nurserymen. We now scarcely ever see the name "Lawton" used, except in the advertisement of the person who bears this name.

☞ Can some of your correspondents inform your readers, if they know anything of "Poland wheat or Giant rye," as to the yield and its uses. S. M. Dyer. *East Desmoines, Iowa.*

Salt on Wheat Land.—I notice J.'s inquiry about salt. Two bushels per acre was but a small quantity to sow with his oats. He might sow twice as much with his wheat, either now or in April. I have of late years sown in the fall shortly after sowing the wheat. My object in sowing salt is to make the wheat earlier, and when the land is rich to make the straw stiff, so that there is less danger of lodging and rust; but I have had very little rust since my land was drained. Salt answers an excellent purpose on all low land. John Johnston.

Chester County Pigs.—Will you please inform me where I can get the pure Chester county hog, and whether there are any others superior to them—if so, from whom they can be had? Your attention to the above will greatly oblige Andrew L. Pitzer *Fincastle, Va* [You can get the Chester County pigs of Thomas Wood, Penningtonville, Chester Co., Pa.]

Cotswold Sheep.—Can you inform me where I could find—or probably purchase—a few pure improved Cotswold sheep, nearest to this locality? And also whether such sheep would be likely to do well in this "region" of country, with a little more attention than the "natives" get? A. P. McD. *McLeansville, Guilford Co., N. C* [Good Cotswold sheep can be procured of Col. J. Ware, Berryville, Va., Henry Carrol, Westerman's Mills, Md., and Wm. Reybold, Delaware City, Del.]

NEW PEAR.—Enclosed please find five pears, grown on a tree in my garden in this city. Being unable to identify it by comparison, with the aid of Downing's and Thomas' fruit books, and believing it worthy, I have called it the Emigrant, from the fact of the tree being bought of an emigrant about eight years since, while passing through the city. It has fruited for past three years. If it is not asking too much, I would like to have your opinion of its quality, and also its proper name, if you know the same. JOHN BURT. *Albany, Oct* 17, 1859. [The few specimens sent do not enable us to identify it with any old sort—in general appearance, character and quality, it considerably resembles the Urbaniste—the form is however somewhat dissimilar, but pears often vary in form. It is doubtless some European variety. It is rather above medium size, obovate-turbinate, greenish yellow, dots small; stem an inch long, clavate, fleshy at insertion, not sunk in a cavity; calyx large and reflexed, basin shallow and ridged, flesh buttery and melting, perhaps "very good." It is worthy of further attention]

ROTATION OF CROPS.—I am about dividing my farming land into six or seven lots, in which I want to introduce a system of rotation of crops which will benefit both purse and soil. I shall be able to manure one lot a year with from ten to fifteen two-horse loads of manure per acre. What crops shall I raise? Wheat, corn, oats, and clover, do well here. R. F. BINGHAM. *Mahoning Co, O.* [A favorite rotation in many places is, 1. Corn (and roots) with all the manure; 2. Barley, peas and beans; 3. Wheat, with clover seed; 4. Clover, pasture or meadow, one, two, or three years. If the soil is strong, oats may be substituted for barley, but a moderate dressing of well-rotted manure on the oats stubble is a great improvement, or perhaps quite as useful or more so, on heavy soils, would be a thin dressing of long manure on the wheat after it is up, just at the beginning of winter.]

☞ Is the farm first described in Annual Register, 1858, headed "A Complete Country Residence," on page 21, in actual existence, and if so, what can it, or a similar one on a small scale, be purchased for? W. G. [The residence described, is with a very little variation, a description of two places owned at different times by the same person. We know of no such place for sale, but there are doubtless others quite equal to it, occasionally coming into market. The price would vary greatly with the locality, price of land in different places, and other circumstances; but all the improvements there described, including the erection of the house, barns, and outbuildings, and planting and early cultivation of the trees, might be done for about four and a half or five thousand dollars.]

BOOKS ON SHEEP AND ON DWARF PEARS.—Will you please inform me through THE CULTIVATOR, what you regard as the most reliable works upon the following subjects: Sheep Husbandry--Cold Grapery, its Construction and Management — the growing of Dwarf Pears, with practical directions for pruning, &c. J H. OSBORNE. *Amesbury, Mass.* [Randall's Treatise on Sheep is published by C. M. Saxton, Barker & Co., New-York, and sent by mail for $1.25. Morrell's Sheep Husbandry, published by the Harpers, for $1, contains many excellent suggestions. Chorlton's Grape Grower's Guide is published by C. M. Saxton & Co., and supplied for 60 cents. Barry's Fruit Garden, furnished by the same publishers for $1.25, contains the most full and complete directions for raising, pruning and training dwarf pears. More condensed directions will be found in the first volume of "Rural Affairs."

BARN-YARDS—HOW SHALL THEY BE MADE?—The best plan for constructing barn-yards has received considerable attention from writers on agricultural matters, but we have never chanced to notice any plan free from sundry objections. Yards holding water are liable to be wet and miry; those which are drained, drain off also the valuable constituents of the manure. A large yard exposes the contents over too much surface to decompose readily, while a small one, if dry, is trodden so hard as to be liable to the same objection. A considerable degree of moisture is required—and just enough is important, too much being more objectionable than too little. How shall we make our barn-yards just right, both to accommodate our stock and manufacture our manure? TYRO.

MILLET.—I enclose you a head of millet—(is it millet?)—or, as some call it, India corn. Please give its true name. I have raised it to some extent for soiling, and find it a very good crop, if sowed pretty thick. J. L. RICE. *Watertown, N. Y.* [The head enclosed is the common millet—*Panicum miliaceum* of Loudon.)

CHICKWEED.—Can you or any one of your correspondents tell what will destroy that pest called *chickweed?* It is quite troublesome in our rich lands in this town and county. A word of advice is solicited from any one on this subject, in reference to its destruction. A. LAWRENCE.

Winter Barley.

Winter barley is a variety of grain that has only been tried in this State for a few years, and has not yet got largely into cultivation. Wherever it has been given a fair chance, it has done well, as we know by the crops which we have seen. In a letter to the Branch County *Republican*, Mr. Jas. Clisbee, a well-known and prominent farmer, thus writes of winter barley:

"The winter barley has been grown in this vicinity for the last three years, and is, consequently, no longer an experiment. With us it has done well in every instance where it has had any chance. The general yield is from 20 to 24 bushels to the acre. Judging from what we have seen of the grain,, it is capable of yielding 80 bushels per acre. During the past season it has been raised by the side of spring barley, and has produced four bushels to one of the spring variety. Mr Amos Culver of this place, (Quincy,) has raised during the past season, 60 bushels per acre on oat stubble once plowed, or 180 bushels on three acres, and on land that has been cropped for eight years in succession.

We think it has decided advantages over spring barley, viz:

1st. It may be sown after farmers get through with their hurry in sowing winter wheat.

2d. It may be harvested before wheat is ripe.

3d. It has no black or false heads.

4th. It yields two to one, at least.

5th. The insect will not hurt it in the fall, and it is so early that the weevil will not hurt it.

We are in hopes this barley will prove a substitute for the wheat crop, if we should be obliged to give up the cultivation of that grain in consequence of the insects and weevil, which at present threaten its destruction in Michigan.

This variety of barley should be sown some time between the 15th of September and the 1st of November, requiring about two bushels of seed per acre. It will ripen ten days earlier than wheat, and leaves the ground in good condition for that grain.—*Michigan Farmer.*

RAISING COLTS.—Jacob Strawn, the great Illinois stock-grower, says he can raise five colts large enough to use, cheaper than one steer, but the trouble with the former is, that you cannot sell a lot of colts together for the cash as you can steers. His stock horses run out all winter—he wintered over seventy head last season, without grain of any description. They did not all eat over six tons of hay, having the run of a blue grass pasture, with water and brush in it. He never weans a colt, or catches the horse to put to mares, but turns them together to do as they please. This is "wholesale prairie farming."

Heeling in Trees for Winter.

Many inquiries are made on this subject, which we answer once for all. Some purchasers of young trees regard it a calamity to receive trees very late in autumn, unless the weather admits of their being immediately planted out. This is a mistake; for, as a general rule, trees are better not to be planted till spring.

We have invariably had the best success where trees to be conveyed long distances were taken up and sent in autumn, properly heeled in for winter, and set out early in spring. Indeed, this is the best mode generally, if transplanted again in the same neighborhood. Trees taken up in autumn may be more effectually protected than if left to stand in the nursery row. There are different ways of doing this. Where there is no danger from the attacks of mice, the trees may be laid down in an inclined and nearly horizontal position, and the roots and stems covered with mellow earth, *carefully filling all interstices*, and leaving only the tops out of the ground. Thus secured, winters of great severity cannot injure them. Where the attacks of mice are feared, the danger may be lessened by placing the trees in a clean plowed field, some distance from grass or the boundary; and all danger removed by placing them erect, compactly together, and banking up in the form of a mound about them. The only disadvantage of this position is exposure to cold winds—which may be entirely obviated by encasing them with evergreen boughs, set upright about them, and secured by tying. The thicker the coating of evergreens, the more perfect is the protection. The mound of earth is completely effectual against mice, as none will ever ascend an abrupt bank of smooth, fresh earth or snow. For the same reason a young orchard in any situation may be perfectly protected from mice by banking up smooth, compact, fresh earth about the stems, a foot high, just before winter sets in, to be leveled again the following spring.

Trees usually make a slight growth till late in autumn, and such as are taken up at the common transplanting season and heeled in will often be found afterwards with small, fresh rootlets. In spring small new roots are soon thrown out. The great advantage therefore of autumn dug trees is that when lifted from the bed where they have remained for winter, these small roots are easily carried along and set out with them, which not only insure their living, but give them an earlier start.

Raspberries, blackberries, grapes, &c., whether heeled in or set out in autumn, should be nearly or entirely covered with an inch or two of earth as a protection—for even if entirely hardy under ordinary circumstances, they are always made more tender and less able to endure cold by removal, unless thus protected.

Strawberries taken up in autumn so late as not to get a fair start and grow some, are very apt to be thrown out and killed. Burying them with earth causes them to rot. If received late the best way is to set them out for winter in thick and close rows, tread the earth firmly about the roots, and then cover them a few inches with the small branches of evergreen trees. Moss will do nearly as well. Straw or litter is sometimes used in the same way, but as it becomes closely packed when wet by rains, the protection it affords is imperfect, and sometimes it causes the young plants to rot. Forest leaves are much better—indeed, they form an excellent protection for all tender plants. An open box, a foot or twenty inches high, placed about tender plants, and filled with forest leaves, will often entirely shield the ground from freezing, and afford sufficient shelter to some roots which otherwise might require greenhouse protection. It is well known that the earth in dense forests scarcely ever freezes—many tender plants would survive in such places—and this protection might be perfectly imitated artificially by covering the bed of leaves just described, with a layer of large evergreen boughs.

Trees which are received from a distance in a frozen condition may be preserved uninjured if at once well buried in fresh earth, before they are thawed in the air. In burying them all the interstices among the roots must be closely filled, which operation may be greatly assisted by settling the earth with *cold water*. We have known the roots of trees frozen as stiff as icicles, yet they lived and grew well when thus treated; but when thawed out of the ground every vestige of vitality was immediately destroyed. Trees well packed for sending long distances, are not in danger from ordinary freezing and thawing; that is, if the roots have been immersed in mud to give them a thick coating, and then densely imbedded in damp moss, which secures them from injurious thawing nearly as well as when buried in earth.

Saving Fire Wood.

On looking over our wood-lot this fall, we find that it will be excellent economy for us to cut and prepare for use, the many fallen trees and limbs which have accumulated through the season. We presume the same is true of the wood-lots of many of our readers, and hence "make this note of it." The swamps are as yet unusually dry, and the old wood which may have remained from former years in good condition, and the whole, in many instances, will furnish very nearly the supply for the year.

The value of wood is much enhanced by being cut and split while green, and seasoned under shelter. It burns much more readily, and gives out more heat than if cut after long exposure to the weather. The softer woods are more than doubled in value by early cutting and seasoning,—indeed they are of very little worth as fuel without it. Let us, then, get out all that is valuable from the swamps, and not be compelled as last winter, to wait in vain for their freezing up, so as to make entrance with teams practicable.

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Markets for Fruits.—The question is often asked why the prices of fine fruits have been rising of late years, at the same time that new orchards by the thousand are coming into bearing? The answer is obvious—people never buy what they know nothing of whatever may be its value. Twenty years ago, not one person in ten thousand knew the existence of many of our best fruits, and there was little demand for them. The most remarkable indication of progress is the rapid dissemination of the knowledge of the finer varieties, and as a consequence many desire them, and will pay a high price for them. This state of things will continue for a long time to come before the whole population can get all they want of the most delicious sorts.

Tenn. State Fair, Eastern Division.

KNOXVILLE, East Tenn., Oct. 29, 1859.

MESSRS. EDITORS—I embrace this, my first leisure since the Fair, to give you some "items." I am sorry to say that *horse racing* was the *leading feature*. I do not think that the State should be taxed to give large premiums to the breeders of race stock. There are only a few of our citizens engaged in the business, and I think that the premiums should be offered for the articles produced by farmers generally. The community is down on the management of the Fair, and I am glad of it.

There were some fine cattle—a bull-calf, (Durham,) five months and six days old, weighed *six hundred and seventy-three pounds*. A fine calf—pure white.

Some fine hogs were exhibited. One, thirteen months old, weighed five hundred and fifty pounds. One monstrous porker from Middle Tennessee, was exhibited "*under canvass*." He was five years old, and weighed *fifteen hundred*, pounds. He was not over fat, and some "fatteners" said that he could be made to reach two thousand pounds.

The premium crop of corn, was one hundred and sixty-six bushels per acre. [Query—Shelled or in the ear?—EDS.] Wheat, thirty-three bushels per acre. Some very fine vegetables were exhibited. One sweet potato weighed eleven pounds. Some specimens of beets, pumpkins, cabbage, &c., were very fine.

The Ladies' Department attracted much notice. I suppose it was a "good show." On account of the constant crowd, it was almost impossible for me to get even a "distant view" of some articles on the wall, over the heads of the crowd.

Altogether, the Fair was not as good as last year. *Horse racing better*, and other things worse.

Weather still fine—the last two nights were right cool. Ice formed to the thickness of half an inch in pans exposed. Thermometer 28°. A. C. CARNES.

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American vs. English Ag. Papers.

From the London Literary Gazette.

"For years we have received, and perused with inindescribable interest, the beautifully illustrated agricultural periodicals of the United States, such as *The Albany Cultivator*, or *Country Gentleman;* and we have, we must confess, felt alike surprised and ashamed to witness the interest taken in every phase and development of agricultural science in England, amongst a people whose agriculture, quite as advanced as our own, is held by us in contempt, and treated as in nonage. We are not singular in this feeling. We submitted the handsomely printed and spiritedly written and embellished transatlantic periodicals to our first horticulturists, and to agriculturists of the highest reputation, and their astonishment and delight have invariably equalled our own; the best test thereof being the instinctive desire of subscribing to publications possessing so much intelligence and utility. That the very existence of these papers should be unknown, however, to the reading public of this country, is by no means surprising as regards agriculture; our farmers and others possess their established organs, whence nothing on earth could induce them to deviate; and one or two attempts, such as the *Scottish Agricultural Journal, Western Agriculturist* (Glasgow,) etc., by a single individual, to provide a rational periodical literature for British husbandry, have been visited with that discouragement which a preference for the dull, old, absurd, routine of common market tables, and a religious fidelity as respects every shade and shifting of the weather or the crops, can so well supply, to extinguish discussion and forbid improvement. It is indeed lamentable, but true, that, with exception of the occasional run on a foolish pamphlet, there is not on earth a more thankless task for the author than writing for the agriculturist."

Best Winter Feed of Cattle.

Some remarks upon the winter feeding and management of stock, at a recent meeting of the Am. Institute Farmers' Club, remind us of our advocacy, last winter, of a "Change of Food for Stock," (Co. Gent., Feb. 10, '59) and afford additional authority to the views there presented from our personal experience. We condense below from the *N. Y. Tribune*, the most important points called out in the discussion.

Mr. Gale, a farmer formerly of Orange Co., fed his cattle early in the morning with the coarsest fodder, and on some pleasant days fed them only on such fodder. In stormy weather he fed his best hay, but he would not, if he had it, feed cattle altogether upon timothy hay, if he could get straw and other coarse food. There is no one sort of fodder that will keep a herd of cattle so well as a great variety of food, and the greater the better. Mr. G. feeds his stock four or five times a day, making it a law to feed often, and a little at a time. He thinks it a bad plan to reserve the coarse fodder for bad weather, because the cattle would then eat it for the want of something else. His stock are all kept in stables as warm as he can make them. His horses are fed on good hay all the time. In his opinion, a vast amount of good stock feed is wasted in this State for the want of knowing how to use it, and in this every observing farmer must coincide with him.

Prof. Nash said the grand secret of feeding cattle is to give a great variety of food—as great as possible—and arrangements should be made in summer to effect that object. Stock may eat poor food for a few days without injury, but such food cannot be continued for any length of time without detriment. The general principle should be to give an animal a morsel of very good food every day. They will then eat up the coarse fodder, because all the time healthy.

Mr. Thurber used to put coarse fodder in the manger, with good hay on the top. The cattle eat both. In the morning he fed first good hay, and followed that with roots or grains, and always fed hay at noon, and then turned out his stock to water or exercise. The refuse food was saved, sprinkled with brine, and put back in the mangers, so that nearly all was consumed.

One member thought high value should be placed on cornstalks. We have found them excellent for milch cows and all neat stock. With cornstalks, wheat and oat straw, and two or three kinds of hay, one can give quite a variety of food, and if they have in addition roots and grain, for occasional feedings, cattle may, with proper shelter, be well and cheaply wintered. We intend to offer further hints on this seasonable and interesting subject.

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Cocoa Nut Pie.

One cup of sugar—butter the size of an egg—whites of three eggs beaten very stiff—half a cocoa nut grated, and the milk. NANCY.

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Cole's Chrystal Celery.

MESSRS. EDITORS—I send you some seed of Cole's Chrystal White Celery, which is undoubtedly the best variety cultivated. It has not been in cultivation long in this country. It was originated in England and introduced here through the U. S. Patent Office. I can send you more of the seed if you wish it, as I raised a lot for distribution among those who wish to give it a trial. F. A FLEMING. *Curwensville, Clearfield Co., Pa.*

Notes for the Month.

Sale of Herefords.—We notice in our foreign exchanges of the 10th ult., a notice of the triennial sale of Lord **Hatherton's** drafted breeding Herefords, at Teddesley, Staffordshire. From a personal visit at Teddesley in August last, we are able to unite in "the general expression of admiration" with which it is stated that this beautiful herd was unanimously regarded by the numerous gentlemen from Herefordshire and other counties in attendance at the sale; and we may take this opportunity to express our acknowledgments to J. **Bright**, Esq., Lord Hatherton's Manager and Steward, for much information, the benefit of which at a later day we shall endeavor to impart to our readers. "The whole herd, numbering nearly 200 animals, was conveniently arranged for inspection in the Park, and elicited the highest praise. Its uniformity of color and character was most attractive, even to the eye of a casual observer, whilst its quality and substance were pronounced equal to that of the best stocks in Herefordshire. Mr. Preece (who conducted the sale,) in his opening address, strongly remarked upon the care and judgment exercised in providing the herd, and by a practical analysis of the catalogue traced their origin to, perhaps, the best blood in the "Herd Book," viz., that of the Right Hon. Lord Berwick, Mr. Hewer, and the late Mr Jeffreys, of the Grove—thus accounting for its beauty and symmetry and aptitude to fatten, although bred and reared upon land of very ordinary quality, upon the confines of Cannock Chase. That fine stock bull, "The General," (the property of Mr. Hewer,) which has been used at Teddesley for nearly three years, was exhibited, and although nearly twelve years old, was a perfect picture of health, beauty, and activity; his lettings have realized for his owner upwards of £600. The cows and heifers realized nearly 25 guineas each, and the bull calves 30 guineas each."

☞ With the aid of Cook's Portable Sugar Evaporator, manufactured by Blymyer, Day & Co., of Mansfield, O., it is stated that 30 to 40 barrels of juice can be sugared off in ten hours, with a half cord of wood for fuel, and that it answers equally for the Chinese Sugar Cane and for the sap of the Maple. This invention was exhibited at the State Fair in this city, and is advertised at length in the Co. Gent. for Oct. 13, and in the Cultivator for November.

Large Plums.—The Portland (Oregon) Daily News of Aug. 20, thus notices some Plums grown by one of our Oregon subscribers:—"We saw in the Daguerrean Rooms of Messrs. Buchtel & Cardwell, a clump of plums, raised by David D. Prettyman, which eclipses anything in the fruit line we have ever seen. The bunch contains 32 full sized Imperial gages, averaging four inches in circumference, which grew in a cluster on the stem, occupying less than four inches of space."

"Draining Lengthens the Season."—A writer in the *N E. Farmer* gives some account of a lot of three acres, heretofore cold, wet lowland, covered with water until late in the spring, on the farm of a Mr. Allen. Its usual product was about two loads of poor hay, fit only for bedding, and never repaying the labor necessary to secure it. In 1856 it was underdrained with tile laid four feet deep, at the expense of 45 cents per rod "*The season is about three weeks longer* on that piece of land than it ever was before." It is now cultivated with less labor, at a good profit, being at present a part of a highly productive meadow.

Potato Crop of Western New-York.—The present autumn's crop of potatoes is unusually large, but considerably affected by the rot. The freeze of the last of September also injured many of those then ungathered—the long varieties, with their ends near the surface, suffering most. The *Rural New-Yorker* tells of crops near Rochester, where Buckeyes gave 280 bushels per acre, Peach Blows about 250 bushels, Flukes the same, and Prince Alberts from 260 to 300 bushels. The Davis Seedling the *Rural* thinks "the most productive good potato grown. In hills three feet apart each way, it produced 318 bushels per acre; in rows two feet apart, and the sets one foot apart in the rows, 344 bushels," from 60 to 70 bushels more than Prince Alberts or Peach Blows, with the same treatment.

Prairie Shooting.—Prairie chickens, quail, ducks of all varieties, geese and sand-bill cranes, were never more abundant. Prairie hens fly over my house by the hundred about daylight every morning, seeking the more heavily timbered country of Illinois. A friend, Mr. D. C. P. of New-York, visiting at my house, was one of a small party that returned from a hunting expedition to the mouth of the Iowa river and the many lakes of Louisa county, last Saturday. The party brought home 212 ducks and 29 geese, beside killing all the small game necessary for daily consumption. I wish I could hand you a Goose and pair of Mallards from the string now hanging in my larder. W. A. *Scott Co., Iowa, Oct* 30

Peculiarity of Potato Rot in Wisconsin.—As has been generally the case throughout the Southern States I believe. we have had a very dry summer in Wisconsin, and of course the soil and the atmosphere has been dry in a corresponding degree. Yet the fact has been pointed out to me as very remarkable, that the potato rot has been much more destructive in this vicinity on dry sandy soils, than on loams, with more clay in their composition. Whatever may be the cause, I have irrefutable evidence of this fact.

Excess of moisture in either, or both, soil and atmosphere, has, in former years, been supposed to promote the ravages of this disease; but in the instances here spoken of, neither one nor the other could have been an exciting cause, both soil and air having been very dry.

Such and similar facts would seem to militate against the idea that this disease is of atmospheric origin, or that it is due to excessive humidity. I have formerly seen it under such variety of conditions, in some respects the reverse of one another, that I am not inclined to favor the atmospheric theory of its origin. But as to the insects, I have not seen them in the fact, and have neither time nor inclination to search out their hiding places, or observe their wicked ways if I found them—hence I refrain. J. W. Clark. *Marquette, Wis*

Thomas' Draining Plow.—An interesting account of the Draining operations at "The Meadows," the residence of C. S. **Wainwright**, Esq., lately appeared in the Tribune. Mr. W. has already, it appears, put in five miles of tile drains, in addition to an equal extent of stone drains laid down before tile could be had in this part of the State. He is constantly extending his system of drainage, having now 10,000 tiles, it is stated, as a first installment in a new portion of the meadow; and, remarks the writer, "the opening of the ditches is greatly expedited by the use of a surface plow and Thomas' draining plow—a simple but effective subsoiler that disturbs the soil at a depth of twenty inches or so beneath the surface. In half a day, with two men and two pair of horses, Mr. Wainwright started drains for 9,000 tiles, one spit deep, leaving the remainder to be dug with the draining spade."

The Grape Crop.—Extract of a letter from Dr. **Underhill**, Croton Point Vineyards, to the Country Gentleman:—"The Isabella grape has been a short crop this year, from blossoming during the long cold easterly winds in June, which hurt the blossoms. Some buds were injured by the cold winter, but enough were left unhurt to give a good crop were it not for the effect of the storm. The Catawba blossomed in the following week of dry weather, and gave a fine crop. I notice in the reports of the discussions at the American Institute, published in the New-York papers, that efforts are making to destroy the character of the Isabella and Catawba grapes, by setting afloat a story that they were unhealthy and must be abandoned, than which nothing is farther from the truth. From all the sources of information which I possess, I can say nothing of the kind exists. I am planting them faster than ever, under the full conviction that in this climate and farther north, and all through the south and west, they remain unequalled as table and wine grapes for vineyard culture."

"How to Farm Profitably: *Or, the Sayings and Doings of Mr. Alderman* Mechi."—We had not had the opportunity of acknowledging our indebtedness to Mr. Mechi for a copy of his book received just before finally leaving London, when a second copy, of a new and enlarged edition, reaches us here, through the hands of the publishers, Messrs. Routledge, Warne & Routledge, of Farringdon Street, London, and 56 Walker Street, New-York.

It has been the purpose of the writer at an early day to give as concise an account as possible, of an instructive visit made at Tiptree Hall last summer, and to call the attention of our readers at the same time to the numerous practical and common sense suggestions with which the book before us abounds, scarcely less for the American than for the English farmer. Meantime we have noted various extracts for publication, and are quite confident that no one would consider his money wasted who should expend it in the purchase of the whole book.

The additions to the present edition increase the number of pages from 284 to 316. The volume comprises that part of Mr. Mechi's contributions to Agricultural Literature, in the form of essays, speeches, letters to the newspapers, &c., which he has considered the best adapted to reflect his practice and opinions, and to extend among the agriculturists of Great Britain what there is of good in either, as experience and time shall try them both.

Prince Albert Potatoes.—We tried a small experiment with this variety the present season, by planting one-sixteenth of an acre, on an inverted sod, prepared afterwards by Shares' Harrow. No extra attention was given—the seed, after dropping 20 inches apart in the row, was covered with a plow—the whole amount of cultivation not amounting to half a day's labor, and the digging, with the assistance of Allen's potato plow, and drawing into the cellar, requiring about two-thirds of a day. The product was a little over *twenty-five bushels*, or at the rate of about *four hundred bushels per acre*. About two dozen potatoes were found affected more or less with the rot, in a region where more than half of many crops of other varieties were spoiled by this malady. In another piece of about the same size, also planted with the Prince Albert, and yielding a little less, only two rotted tubers were found.

Ag. Clerk of the Patent Office.—The papers, with how much truth we are unable to say, state that D. J. Browne, who has held the office of chief clerk of the Ag. Department of the Patent Office for six or seven years, has been removed, and that Hon. C. B. Calvert, of Maryland, has been appointed his successor.

Our State Fair.—A gentleman from the Province of New-Brunswick, who with two others from the same locality, attended our State Fair, and was present at the Agricultural Discussions in the Lecture Room of the State Ag. Society, writes us as follows:

"My visit to your Fair and the Museum and Lecture Room of the N. Y. State Ag Society, I shall not soon forget. This latter feature of your Exhibition—this meeting together of farmers from all sections of the country, and each detailing his experience, is attended by good results. I wish a committee of our New-Brunswick farmers, could attend your Fair each year. They would come home with something to think about, and some point of practice to mend

"I think the great object to be attained by fairs and shows, is not so much the distribution of premiums as it is the sociability it promotes among farmers. Towns people are constantly discussing what concerns them, and so the farmer must meet his brother farmer, and discuss their different modes of practice, if he wishes to hold his own with the townsmen. The meeting in your Lecture Room is proof of what it has done for you."

Scarcity of Hay.—The Sentinel, published at Rome, Oneida Co, in this State, of Nov. 9, says that in "that vicinity, and throughout the western part of the State, loud complaints are already being made about the scarcity of hay. It has occasioned quite a panic among farmers in certain sections, and they are rapidly disposing of their cattle, although wholly unfit for market. Hence the large supply at present in our cattle markets, and the remarkably low prices for beef. It will be strange if there is not a re-action in the spring, to the great profit of those engaged in Still feeding."

The Potato Rot.—We regret to learn that the potato disease is prevailing to a great extent in many parts of the country. The Bridgton (N. J.) Chronicle says that in many instances it has destroyed the entire crop in the middle and upper districts of New-Jersey. The papers in Salem, Gloucester, Camden, and Monmouth counties, in the same State, speak of its ravages as very destructive. An extensive grower in Salem Co. puts his loss down at $10,000. One farmer in Gloucester has lost his whole crop. Others are partially injured, but none of the fields have entirely escaped. In Camden county, some farmers housed their potatoes before the commencement of the late rains, and hope to save a part of their crop, while all the rest are affected by the rot. The Hightstown Excelsior says that the potato crop will be almost an entire failure. Many of the farmers who expected a hundred bushels to the acre, will not save ten. The Monmouth Herald reports the prevalence of the potato rot to a very serious extent, and the crop already half destroyed.

Hamilton Co. Ag. Society.—An Agricultural Society has been formed in the county of Hamilton, with the following organization:

Prest.—Hon. Richard Peck, Wells.
Vice do.—Havilla Winchell, Morehouse, and Edward Anable, Hope.
Treasurer—Isaac Morrison, Wells.
Secretary—Joseph W. Fish, Lake Pleasant,
And an Executive Committee of two from each town in the county.

A large and enthusiastic meeting of delegates from various parts of the county was held at Lake Pleasant on the 12th Oct, for the purpose of organizing this society. Addresses were made by various persons. Harry Caverike exhibited a flat turnip whose weight was 10½ lbs., and which measured 2 feet 8½ inches around. Eleven turnips weighed one hundred and eleven pounds. W. B. Peck of Lake Pleasant, exhibited seven potatoes which weighed 7 lbs. 13 ozs., and one of which was nine inches long and weighed 1½ lbs. F. G. Macomber of Wells, dug five potatoes from two hills which weighed 7 lbs., and one weighed 2 lbs. Ezekiel P. Dunning of Arietta, exhibited plump spring wheat, and John Byce of Gilman, had plump white Canada corn. Statements were made that the corn raised in Hamilton Co. would weigh 65 lbs. to the bushel, oats 44 lbs., and wheat 65 lbs. to the bushel.

Havilla Winchell of Morehouse, made a statement that from twenty cows the present year he had made 4,000 lbs. of cheese and 800 lbs. of butter.

It was resolved that the first annual meeting be held at the court-house in Lake Pleasant, on the 16th of November, at which time a full statement of the condition of agriculture, in Hamilton county, be ascertained. B. C. B.

Prices of Kentucky Farms.—Three farms were recently sold at Lexington—one of 129 acres, six miles from Lexington, at $120 per acre—one five miles from Lexington, at $104 per acre, and another adjoining the last, with no improvements, at $84.50 per acre.

Died, at his residence at Union Springs, Cayuga Co., N. Y., on the morning of the 5th Inst., of congestion of the lungs, DAVID THOMAS, in the 84th year of his age.

After an active and useful life, followed by the retirement of a peaceful old age amidst flowers and fruits and the pursuit of science,—David Thomas had counted his fourscore years with faculties so clear and a form so erect and vigorous, that the temperance and serenity of his habits seemed almost to have exempted him from the burdens that usually come with advancing time. But latterly it has been apparent that his memory, especially, was failing him; he still wrote a firm and distinct hand, however, and maintained his interest, more than anything else we believe, in the garden and trees to which he had before devoted so much attention. He was a firm believer in the great doctrines of Christian redemption, as held by the Society of Friends (orthodox); and, both in his life and in his last illness, he practically exemplified the spirit of Christianity.

David Thomas had been our friend for many years. He had formerly contributed often to the old *American Farmer* and other agricultural periodicals, and was among the first to welcome the establishment by the senior editor of this paper, of the *Genesee Farmer*. And he was always, afterwards one of its most constant and effective supporters. His co-operation was sincere and earnest, extending not only to the liberal exertion of his pen in its columns, but also to the active enlargement of its circulation.

As a Chief Engineer in charge of the original construction of the Erie Canal, and in subsequent times occupying a similar post in carrying through the canals of Pennsylvania, David Thomas always proved himself a diligent servant of the State, according to the ideas of economy and integrity that once prevailed. Of a retiring disposition, however, he never sought for notoriety, and at an early day withdrew from public employment to his farm at Greatfield. Here he labored and wrote in the cause of Agriculture and Horticulture. He was also a distinguished naturalist, and a member of the Horticultural Society of London, the Linnæan Society of Paris, and various associations in this country.

The tidings of his death have only reached us just as this paper is going to press. We shall hope hereafter to recur again to the memory of our friend, at greater length than is now possible. Meantime, this brief testimonial of appreciative and sincere regard, and the expression of our cordial sympathies with his surviving relatives in their bereavement, is due alike to ourselves and to the worth and virtues of the departed.—*Country Gent. Nov* 10.

David Thomas.—In the obituary notice of David Thomas, published in our last number, and prepared necessarily in great haste at the moment of going to press, a sentence occurs which may perhaps be misunderstood. He was not at any time Engineer of the canals of Pennsylvania, but at the recommendation of Gov. Clinton he was offered the station of Chief Engineer of all the canals of the State, with such a salary as he himself might name. The place was subsequently occupied by Dr. Whippo, one of his assistants or pupils.

It may be also added, in pursuance of the idea contained in the remark that "that he was a diligent servant of the State, according to the ideas of economy and integrity which once prevailed," that probably no public officer was ever more scrupulously careful of the public funds, even in days noted for the honesty and thrift of our public men,—when, indeed, it had scarcely begun to be forgotten, to quote the common language of David Thomas, that "the same principle of honesty should always be maintained in using the funds of the State, as those of a friend or neighbor." In this upright course, which he never failed to maintain to a farthing throughout his public career, he could not but have the hearty appreciation and approval of Gov. Clinton, himself a bright example of public virtue. Indeed, Gov. C. not only attested his esteem of the character and abilities of David Thomas by the recommendation above alluded to, but also at a time when our friend had proposed to resign his post on the Erie Canal, the Governor wrote to one of the Canal Commissioners—"The report has excited great alarm among the friends of the Canal. I have writen to Mr. T. that he must not resign."—*Country Gent. Nov.* 17.

* * *

Oswego Co. Ag. Society.—At the late annual meeting of the Society, held in Fulton, it was resolved to hold the next Fair at Oswego. The following officers were elected for the ensuing year:—

President—Joel Turrill, Oswego.
Vice-Presidents—Orson Titus, Hannibal; David Nichols, New-Haven.
Rec. Secretary—John U. Smith, Oswego Falls.
Corresponding Sec'y—Dudley Farling, Oswego.
Trearurer—S. G. Merriam, New-Haven.
Executive Committee—Thomas Askew, Scriba; John Reeves, Granby; D. C. Buell, Oswego.

Allen County (Ind.) Hort. Society.—Officers for the ensuing year:

President—J. D. G. Nelson.
Vice-Presidents—Thomas Covington, M. W. Huxford.
Treasurer—O. W. Jeffords.
Secretary—H. C. Grey.

This Society was organized the present season. Weekly meetings are held for the purpose of discussing Horticultural matters.

Orleans Co. Ag. Society.—At the late meeting of this Society, the following officers were elected:

President—David N. Hatch, Murray.
Vice-President—A. Stewart, Albion.
Secretary—A. R. Patterson, Albion.
Treasurer—Jno. H. White, Albion.

Potatoes.—I planted in the early part of last April, something less than half a bushel of Irish potatoes (red Neshanoes,) in two rows 180 feet long, and dug to-day 10 bushels of potatoes from the same. I have not had much experience in raising potatoes, and don't know whether this is a very large yield or not, but I don't think I ever saw as many potatoes grow on the same quantity of ground before. *College Hill, O.*

Sheep Sales in California.—Mr. J. D. Patterson, of Chatauque Co., in this State, recently took out to California, thirty rams and twenty-two ewes, French Merinoes, for which, as we learn from the California Farmer, he found a ready sale at remunerating prices. He had sold one ram, "Crystal Palace," for $1,500—another for $800, and ten ewes at $300 each.

In the California Farmer of Sept. 22, we find a full list of Mr. Patterson's sale. He sold three rams at $1,500 each—one at $1000—two at $800—one at $700—one at $600—six at $500—nine at $400—and one at $300, making a total of $15,000, or an average of over $681 per head. Fourteen ewes were sold for $4,500—over $321 per head, making a grand total for thirty-six head, of $19,500.

Feeding Fattening Hogs.—A hint to feeders, valuable though not new, may be found in the following, condensed from the *Boston Cultivator*. Warm, dry pens should be provided for our swine, and their quiet and comfort studied as much as possible. By so doing we save many bushels of grain. The best feeders change the food frequently, and find they make a decided profit by so doing. If salt is occasionally given, it tends to keep up the appetite, as well as aids digestion. Too much rich food is injurious—the stomach can only assimilate a certain quantity at once. If an animal loses its appetite, the food should be at once changed, and very generally to something lighter, as roots, pumpkins or apples. Sour milk adds much to the growth of hogs, (and we have seen the statement well verified that raw meal mixed with sour milk, was much better for fattening pigs than any cooked food whatever.) Fermented food is much preferred by some feeders, and it is well to give it as a change, if no more.

☞ We see it stated that the receipts at the late Pennsylvania State Fair, amounted to $23,000.

THE SATURDAY EVENING POST.

A CHANCE TO OBTAIN TWO HANDSOME STEEL ENGRAVINGS.

HAMILTON'S VIEWS OF NIAGARA FALLS.

A Beautiful Engraving also as a Premium to EVERY SUBSCRIBER!

THE Proprietors of the SATURDAY EVENING POST—"the oldest and best of the Weeklies"—have the pleasure to announce to the reading public, that they have made an exclusive engagement with an Author whose powerful Stories have of late attracted great attention; and that they will open the year 1860 with a novelet, *written expressly for* THE POST, called

THE EARL'S DAUGHTERS;

By the AUTHOR of "THE RED COURT FARM," "THE ROCK," "ASHLEY," the "HESTER HALLIWELL" Stories, "THE SIX GRAY POWDERS," "THE DIAMOND BRACELET," &c., &c.

In this story, written expressly for THE POST, this powerful writer's genius has had full scope afforded it; and we are able to state—having read it in manuscript, for it is already in hand—that it will make a sensation, unless we are greatly mistaken, as one of the most powerful and interesting stories ever published.

To enable those unacquainted with THE POST to judge of the richness and variety of its general contents, we may state, that during the past year we have published novelets, stories and other articles from the pens of the following gifted writers:—

G. P. R. JAMES,
CHARLES DICKENS,
ALFRED TENNYSON,
CHARLES READE,
HENRY W. LONGFELLOW,
CHARLES MACKAY,
WILKIE COLLINS,
DR. O. W. HOLMES,
T. S. ARTHUR,
AUTHOR OF "THE SCOUT," &c.
ALEXANDER DUMAS,
JOHN G. WHITTIER,
OWEN MEREDITH,
P. J. BAILEY, (author of "Festus."

MARY HOWITT,
AUTHOR OF "THE RED COURF FARM,"
AUTHOR OF "FARM OF FOUR ACRES,"
GRACE GREENWOOD,
MISS PARDOE,
FLORENCE PERCY,
AMELIA B. EDWARDS,
EMMA ALICE BROWNE,
AUTHOR OF "THE EBONY CASKET,"
MRS. MARY A. DENISON,
FANNY MALONE RAYMOND,
NORA PERRY,
ISA CRAIG,
HARRIET MARTINEAU.

THE POST does not confine itself, however, to works of the imagination, as so many Weeklies now do. It generally devotes a fair portion of its ample space to the NEWS of the WEEK, FOREIGN and DOMESTIC, to an AGRICULTURAL DEPARTMENT, BANK NOTE and STOCK LISTS, and to a WEEKLY and ACCURATE PRICE CURRENT of the PRODUCE MARKETS, &c., &c.

TERMS—ENGRAVINGS—A PREMIUM ENGRAVING ALSO!

HAMILTON'S TWO VIEWS OF NIAGARA FALLS—a couple of handsome and large-sized *Steel* Engravings—the retail price of which is FIVE DOLLARS—we are enabled to Club with THE POST on the following remarkable liberal terms.

We also Club with those well-known Monthly Magazines, Arthur's Home Magazine, and Godey's Lady's Book. Read the following, and take your choice of

TERMS.

One Copy of THE POST	$2 00	a year.
One Copy of THE POST and BOTH Engravings of Niagara Falls,	3.00	"
One Copy of THE POST and one of Arthur's Home Magazine,	3.00	"
One Copy of THE POST and one of Godey's Lady's Book,	3.50	"

CLUBS.

2	COPIES of THE POST		$3.00	a year.
4	"	(and *one* of the Engravings to getter up of Club.)	5.00	"
8	"	(and one copy extra, *or* both Engravings, to getter up of Club,)	10.00	"
13	"	(and one copy extra, *or* both Engravings, to getter up of Club.)	15.00	"
20	"	(and one copy extra, *or* both Engravings, to getter up of Club,)	20.00	"
30	"	(and one copy extra, *and* both Engravings, to getter up of Club,)	30.00	"

P. S.—The Postage will be pre-paid on all the Engravings.

A BEAUTIFUL PREMIUM.

A large and beautiful Engraving on steel, 17 by 23 inches, called "THE SPEAKING LIKENESS," will be sent to every subscriber to "THE POST" for 1860, who shall send, in addition to his subscription, the sum of twenty-five cents, to pay the expense of postage, mailing, &c., &c. The retail price of this engraving is FOUR DOLLARS! It is a Gem! Address

DEACON & PETERSON,
No. 132 South Third Street, Philadelphia.

☞ SAMPLE COPIES OF THE POST SENT GRATIS WHEN REQUESTED. ☜

FOR SALE—The Two-year-old SHORT-HORN BULL "ORION," got by "Squire Gwynne 2d," 1101, out of "Fillpail IV," &c., &c. See American Herd Book.

The subscriber offers him for sale upon reasonable terms, having another young bull not so nearly connected to his stock.

He took the second prize in his class at the State Fair at Albany. Any one wishing to purchase, or desiring pedigree or further particulars, may address

A. M. UNDERHILL,
Nov. 1—w2tm2t Clinton Corners, Dutchess Co., N. Y.

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address WM. LAWTON, New Rochelle, N. Y.

☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

FARMERS & MILLERS TAKE NOTICE.—We have just introduced a new mill,

Which is the "Neplus Ultra" of Mills,

For grinding feed of all kinds, also for flouring. It is portable, and will grind with an ordinary Two Horse Power, from *five to seven bushels of feed per hour perfectly.*

It is called "Lyon's & Phillips' Patent," and is warranted to work satisfactorily, or it can be returned at our expense. It is no humbug, but a "Simon pure article;" and every Farmer and Miller that uses it will certify that it is just the article represented.

Price for Feed and Corn Cob Mill,	$100 00
" For Feed and Corn and Flour Mill,	115 00

Weight 450 pounds, and requires a space of four square feet. For further particulars address,

PEASE & EGGLESTON,
Aug. 4—w10m4t. Albany, N. Y.

ANDRE LEROY'S NURSERIES
AT ANGERS, FRANCE.

The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends and the public, that his Catalogue of *Fruit and Ornamental Trees, Shrubs, Roses, Seedlings, Fruit Stocks, &c.*, for the present season, is now ready and at their disposal. Apply as heretofore, to

F. A. BRUGUIERE, 51 Cedar-Street,
Oct. 6—woam3m—m3t. New-York.

FOR SALE—10,000 HUDSON RIVER ANTWERP RASPBERRY PLANTS, at $20 per 1000—$2 50 per 100. Also 100 barrels "STUDLEY SEEDLING POTATOES," a very early kind and not subject to the potato rot. Fall price, $2 per barrel.

Address S. V. C. VAN RENSSELAER,
Nov. 10—w3t—m3t Claverack, Columbia Co., N. Y.

IMPROVED SHORT HORNS.—The subscriber, wishing to reduce his herd in numbers, offers for sale at moderate prices several excellent COWS with good pedigrees.

Apply at Ellerslie Farm, one mile south of Rhinebeck Station, Hudson River Railroad.

Sept. 22—w&mtf. WILLIAM KELLY.

GREY DORKING FOWLS.—I will spare a few pairs or trios of superior young Grey Dorking Fowls at $5 per pair or $7 per trio. Address

S. V. C. VAN RENSSELAER,
Nov. 10—w&m3t Claverack, Columbia Co., N. Y.

CHOICE FOWLS.—A limited number of each of the following varieties to spare, at low prices: Grey Dorking, White-faced Black Spanish, Earl Derby and other Games, and Aylesbury and Rouen Ducks. All warranted to be well bred. Also a few Improved Domestic Turkeys.

Send for Priced Circular. D. S. HEFFRON,
Oct. 6—wtfm3t Utica, N. Y.

PURE BERKSHIRE PIGS.—Choice Pigs, one month old, $5 each; every additional month, $1—sent singly, or pairs not akin, to any distance, well boxed, with food. Pedigrees furnished. My Berkshires are bred from the choice importations of Morris, Brentnall, and others. I can afford prime swine, lower than most other breeders, as I feed them from my dairy.

OTIS E. WOOD, Etna, Tompkins Co., N. Y.

PORTABLE CIDER MILLS AND PRESSES.

We have all the best and latest improved Cider Mills and Presses—also Wine Presses, Cheese Presses, Hay Presses, &c., &c.

A. F. MAYHER & CO.,
No. 54 Vesey Street, New-York,
New Stand, 54 Vesey Street.
Aug 11—w16tm3t.

FARMERS AND GARDENERS sending their P. O. Address to us will receive by mail, gratis, our ILLUSTRATED ALMANAC for 1860, and information concerning Agricultural Implements and Fertilizers. Send us the name and P. O. address of good farmers in your town. GRIFFING, BROS. & CO.,

Oct. 13—w8tm2t 60 Cortlandt-st., New-York.

NEW AND VALUABLE BOOKS—
FOR SALE AT THIS OFFICE.

FARM DRAINAGE. The Principles, Processes and Effects of Draining Land, with stones, wood, plows, and open ditches, and especially with tiles; including tables of rain-fall, evaporation, filtration, excavation, capacity of pipes; cost and number to the acre of tiles, &c., &c. By Henry F. French. Price $1.00.

HINTS TO HORSE KEEPERS: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forester.) Beautifully illustrated. Price $1.25.

A PRACTICAL TREATISE ON THE HIVE AND THE HONEY-BEE. By L. L. LANGSTROTH, with an introduction by Rev. Robert Baird, D. D. Third edition, revised and illustrated with seventy-seven engravings. Price $1.25

The above will be sent, postpaid, on the reception of the prices named. L. TUCKER & SON.

HUDSON RIVER ANTWERP RASPBERRY PLANTS, $2 50 per 100; $20 per 1000.

Lawton & Newman's Thornless Blackberry Plants $6 per 100. DAVID KETCHAM,

Oct. 1—mtf. Milton, Ulster Co., N. Y.

GRAPEVINES.—All the best Native Vines at low prices. One good Plant each of the Anna, Delaware, Diana, Concord, Hartford Prolific, Louisa, and Rebecca, carefully packed for $5.

A large lot of Childs' Superb, two years old, to spare.

Send for Circular. D. S. HEFFRON,
Oct. 6—w6tm2t Utica, N. Y,

HAY PRESSES of all kinds and sizes, both for Hand and Power, at

A. F. MAYHER & CO.'S
Agricultural and Seed Store, No. 54 Vesey Street, N. Y.
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